

AMERICAN GAS ASSOCIATION MONTHLY

MAY • 1938

Natural Gas Convention Opens May 9

R. W. HENDER

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AMERICAN GAS ASSOCIATION MONTHLY

Contents for May 1938

VOL. 20 No. 5

Aiding the Architect.....	163	Huge Production of Helium at Amarillo Plant	180
Natural Gas Convention Opens May 9 in Colorful New Orleans.....	164	Personal and Otherwise.....	183
ROBERT W. HENDEE		Affiliated Association Activities.....	185
Demonstration Homes Prove "Gas Is Best for Four Big Jobs".....	167	Convention Calendar.....	187
HARRY SWENSON		The Public Utility and Its Customers.....	188
Gas Industry Accident Injury Rates Drop in 1937	170	H. R. JESPER	
The Odorization of Natural Gas in the Southwest—Part I.....	171	Managing Committee Reviews Association's Sales Promotion Program.....	189
E. L. HENDERSON		Desirability and Value of Industrial Gas Business	191
Treasure Island—America's World's Fair on the Pacific.....	173	CHARLES E. BENNETT	
CLIFFORD JOHNSTONE		Strong Program Arranged for Annual Gas Production and Chemical Conference....	193
A Credit Union Is Successful in a Large Gas Company	175	Distribution Luncheon Meetings Bring Out Live Discussion.....	194
LESLIE P. BRUCE		CHARLES F. TURNER	
Selling Gas Heating to New Homes.....	176	Hotel and Restaurant Range Requirements Endorsed as American Standard.....	197
W. D. SMITH		Personnel Service.....	200
More Than 400 Engineers Attend Fifteenth Annual Distribution Conference.....	178		

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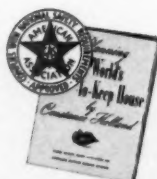
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GAS IS YOUR QUICK, CLEAN, ECONOMICAL SERVANT

A. G. A. national advertisement which will appear in Woman's Home Companion and Pictorial Review for June, and Good Housekeeping and McCall's for July

AMERICAN GAS ASSOCIATION MONTHLY

James M. Beall, Editor

Aiding the Architect

FROM all parts of the country, thousands of entries in the architects' contest sponsored by the American Gas Association have poured into headquarters. Entries have come from every state in the Union and the Dominion of Canada. They have come from Bulgaria, England, Venezuela, Cuba, and other foreign countries. The magnitude and far-reaching effect of the great three-way Liberty Home program are no longer a matter of conjecture.

The key point in the entire program, however, and that which will determine its eventual success, is the extent to which local companies and manufacturers wholeheartedly participate and cooperate. In the first phase, the architects' competition, which closes May 23, the architects, designers, and home planners need help in connection with their competition plans. They should be given every consideration on the part of the local companies by persons thoroughly familiar with the program. They must have complete information about gas appliances and local operating and servicing conditions. Only in that way will they be able to do a worthwhile job and only in that way will the companies get the greatest benefit from their participation.

Lists of the names and addresses of all those entering the competition have been furnished to gas companies and manufacturers. As new entries are received, new lists are made available. These lists are in alphabetical order and arranged by states, so it is an easy matter to spot architects entered from your own territory.

It is suggested that representatives of the local companies should communicate with or call in person on those entered in the contest and offer the services of their companies with respect to proper kitchen and basement applications. Other steps depend upon the initiative and ingenuity of the indi-

vidual companies. Some are seeing to it that their salesmen familiarize themselves with the program so that they may answer questions intelligently. Others are going much further. For example, one large company writes:

"Architects are to be contacted in three ways, namely, by letters, by a buffet supper and meetings for all those who have registered, and by personal calls.

"Letters are to urge participation, to point out the advantages of competing, and to offer information. Three letters will be sent to about 500 architects, including those doing residential work in our territory, others whose state registration is from an address in our territory and any other persons in our territory registered in the contest. The first letter will be sent at once (April 16), the second at the end of April as a reminder and the third about May 10 as a final check. A fourth letter may be sent as a word of encouragement and offer of assistance to each one as he registers.

"A supper is planned for the end of April to present data on gas equipment and to arouse en-

thusiasm for the specification of gas in residential work. Films will be shown and illustrated talks will be given. Operating models of gas equipment will serve to illustrate features and advantages.

"As the A. G. A. notifies us of the new registrants, we shall make a personal contact with each. Information concerning appliances, their installation, features, etc., will be furnished as desired. Addresses of model homes equipped with the four major gas appliances will be furnished. It will be our purpose to make the designers enthusiastic about the advantages of modern all-gas equipment.

"As to the builders' program, this will demand a more elaborate plan to include promotion among builders and the general public."



King Photo

Looking over some of the entries in the architects' competition are, left to right: F. W. Williams, assistant to director, Home Appliance Planning Bureau; Alexander Forward, managing director of the Association; and J. F. Quinlan, director of the Bureau

Natural Gas Convention Opens May 9 in Colorful New Orleans



Robert W. Hendee

FROM the sectional conferences on Monday, May 9, through the closing session Thursday afternoon, May 12, the program for the annual convention of the Natural Gas Department in New Orleans has been keyed to meet the industry's needs of the hour in every phase. Opening sectional conferences are expected to set the tempo for fast-moving general sessions throughout the remainder of the convention.

Sales Promotion Keynote

The domestic sales conference on Monday will feature a little understood angle of sales promotion, an address by George W. Bean, A. G. A. fuel representative at Washington, on "How the Washington Office Helps Promote the Sale of Gas." Also on the opening domestic sales conference program is an address by Streuby L. Drumm, New Orleans Public Service, Inc., on the certified performance ranges, stressing the fact that "Promotion is the Keynote to Success." The session will be presided over by H. E. Meade of New Orleans Public Service, Inc., chairman of the Domestic Sales Committee, and Willard G. Wiegel, Lone Star Gas Co., Dallas, Texas, vice-chairman.

Three outstanding addresses will mark the opening session of the Industrial Gas Get-Together, presided over Monday morning by Hale A. Clark, Detroit City Gas Co., Detroit, Mich., who is chairman of the Industrial Gas Section: "The Gas Company's Place in Servicing Industrial and Commercial Equipment," by Louis H. Hunsate, Jr., of the Memphis (Tenn.) Power & Light Co.; "Developing Aggressiveness in Industrial and Commercial Gas Sales," by George M.

By ROBERT W. HENDEE

Chairman, Natural Gas Department

Parker, Mississippi River Fuel Corp., St. Louis; and "Analyzing Markets for Greater Industrial and Commercial Gas Sales," by W. J. Amoss, New Orleans Public Service, Inc.

A motion picture of the laying of a submarine pipeline across San Diego Bay will feature the transmission committee's opening conference Monday morning, presided over by Chairman A. L. Forbes, Jr., vice-president of the El Paso (Texas) Natural Gas Company. "Design of Liquid Separators for Natural Gas Pipe Lines" will be discussed at the conference by B. M. Laulhere, technical supervisor for the Southern California Gas Co., Los Angeles.

Conservation on Program

What four leading gas producing states are doing about conservation, told by members of regulatory bodies for the respective states, will be a unique feature of the Production Committee's Conservation Symposium on Monday afternoon, presided over by Chairman L. B. Denning, Sr., president of the Lone Star Gas Co., Dallas, Texas. In opening the session, Mr. Denning will point out the chief prob-

lems confronting the industry in conservation, phases of which will be discussed in detail by E. O. Bennett, Continental Oil Co., Ponca City, Okla.; Hugh Stalcup, vice-president, Skelly Oil Co., Tulsa; and Kenneth Eilerts, U. S. Bureau of Mines, Bartlesville, Okla.

Transmission Topics

Combination dehydration and desulphurization; explained by T. S. Bacon, Lone Star Gas Co., Dallas, will lead off the transmission committee session Monday afternoon. Gas hydrate study, improvements in electric and oxy-acetylene welding on pipe lines, practical application of cathodic protection and the use of small intermediate compressor stations to increase main line capacities will round out the session's interest.

A trip through the all-gas kitchens of the Roosevelt Hotel, convention headquarters, conducted by Seymour Weiss, president and managing director of the hotel, will feature the industrial gas sales conference Monday afternoon, with Franklin T. Rainey, business promotion manager of the Ohio Fuel Gas Co., Columbus, Ohio, presiding. Absorption refrigeration for summer air conditioning with gas, and features of modern industrial furnace design to help gas sales should inter-



Four members of the Convention Publicity Committee, whose theme appears to be, "May Time Is Gas Time in New Orleans." Left to right: W. T. Harter, New Orleans, chairman; Charles D. Greason, Kansas City; Will C. Grant, Dallas; Jay C. Barnes, New Orleans



N. C. McGowan



L. B. Denning



Herman Russell



T. R. Weymouth



Davis DeBard



G. E. Welker



H. C. Cooper



W. W. Winter



J. D. Creveling



Hale A. Clark



J. F. Robinson



H. O. Loebell

A few of the prominent gas men who will speak at the Natural Gas Department Convention

est all industrial gas salesmen. How commercial gas kitchens can be kept up to date will be discussed from the angle of the manufacturer as well as from the utility's standpoint at the same session.

Outstanding on the program is an address by Alexander Mahood of Charleston, West Va., president of the National Association of Utilities and Railroad Commissioners. Mr. Mahood will address the general session Tuesday afternoon on "A Few Thoughts on Present-Day Regulation of Natural Gas Utilities." Home service is being given a strong position on the convention program, in keeping with the place it is taking in the industry's work, and part of the Tuesday afternoon session will be devoted to this activity.

General Sessions

The first general session, held Tuesday morning, will stress the address of A. G. A. President N. C. McGowan, United Gas Pipe Line Company, Houston. Also scheduled for the opening general session is an address of Merrill N. Davis, S. R. Dresser Manufacturing Co., Bradford, Pa., who is president of the A. G. A. E. M.

Another feature of the program is

a home planning luncheon conference at noon Thursday, presided over by Herman Russell, Rochester Gas & Electric Corp., Rochester, New York. Following the address of welcome by William J. Gusto of the New Orleans Association of Commerce, Bruce Wilson, director of information for the Federal Housing Administration, will explain "How the Federal Housing Administration's Small House Program Builds Load for Natural Gas Utilities."

Epitomizing the entire convention is an address scheduled for the Tuesday afternoon general session—"New Thoughts and Old First Principles," presented by Cecil F. Elmes of Sanderson & Porter, New York City.

Well Struck in New Orleans "Wall St."

New Orleans has already started preparations to give a fitting welcome to visiting delegates to the Natural Gas Department convention, May 9-12. A gas well has been struck in New Orleans' "Wall Street," Carondelet Street, just across from the Cotton Exchange, according to the "Dallas News," April 1. The drillers were hunting for water to be used in an air conditioning system for an adjacent bank building.

Mingled in with new approaches to domestic, commercial and industrial sales problems viewed from the customer's standpoint, are addresses on the fundamentals of the industry—improvement of field and transmission methods, development of liquefied petroleum gas sales, and a serious, foresighted study of conservation and reserves, as well as major operating problems.

Entertainment Features

Two dances will highlight the entertainment program. On Monday evening a boat dance will be given on the S. S. *President*. The reception and dance will be held in the grand ballroom of the Roosevelt Hotel Wednesday evening.

Following is the detailed program of the General Sessions:

TUESDAY MORNING, MAY 10

GENERAL SESSIONS

Chairman—Robert W. Hendee, Colorado Interstate Gas Co., Colorado Springs, Colo.
WELCOME TO NEW ORLEANS.

"THE FUTURE OF NATURAL GAS," Robert W. Hendee, Chairman, Natural Gas Department.

ADDRESS OF PRESIDENT OF A. G. A., N. C. McGowan, United Gas Pipe Line Co., Houston, Texas.

"NATURAL GAS AT THE NEW YORK WORLD'S FAIR," J. D. Creveling, The

Panhandle Eastern Pipe Line Co., New York, N. Y.

ADDRESS OF PRESIDENT OF A. G. A. E. M., Merrill N. Davis, S. R. Dresser Manufacturing Co., Bradford, Pa.

"POOLING OF ROYALTY INTERESTS UNDER GAS PRODUCING AREAS," J. French Robinson, Peoples Natural Gas Co., Pittsburgh, Pa.

TUESDAY AFTERNOON, MAY 10

Chairman—T. R. Weymouth, Columbia Gas & Electric Corp., New York, N. Y.

"THE ASSOCIATION AND THE NATURAL GAS INDUSTRY," Major Alexander Forward, Managing Director, American Gas Association, New York, N. Y.

"A FEW THOUGHTS ON PRESENT DAY REGULATION OF NATURAL GAS UTILITIES," Alexander Mahood, President, National Association of Utilities and Railroad Commissioners, Charleston, W. Va.

"NEW THOUGHTS AND OLD FIRST PRINCIPLES," Cecil F. Elmes, Sanderson and Porter, New York, N. Y.

"NEW VERSIONS OF HOME SERVICE," Mildred R. Clark, Presiding, Chairman, Home Service Committee, A. G. A., Oklahoma Natural Gas Co., Tulsa, Okla.

"HOME SERVICE ANSWERS COMPETITION ON THE WEST COAST," Ruth Kruger, Central Arizona Light & Power Co., Phoenix, Ariz.

"SALES FLOOR ACTIVITIES," Karen Fladoes, The Peoples Gas Light & Coke Co., Chicago, Ill.

"EMPLOYEE EDUCATION," Albertine Berry, Lone Star Gas System, Dallas, Texas.

"INCREASING RESIDENTIAL LOAD," Mattie Rouse, Consumers Power Co., Flint, Mich.

"DRAMA IN COOKING SCHOOLS," Hulda Ungericht, Ohio Fuel Gas Co., Columbus, Ohio.

"LIVING UP TO OUR ADVERTISING CAMPAIGN," W. W. Winter, Atlanta Gas Light Co., Atlanta, Ga.

WEDNESDAY MORNING, MAY 11

SPONSORED BY THE MAIN TECHNICAL AND RESEARCH COMMITTEE

Chairman—H. C. Cooper, President, Hope Natural Gas Co., Pittsburgh, Pa.

REPORT OF MAIN TECHNICAL AND RESEARCH COMMITTEE, H. C. Cooper, President, Hope Natural Gas Co., Pittsburgh, Pa.

REPORT OF PIPE LINE SUBCOMMITTEE, H. D. Hancock, Cities Service Co., New York, N. Y.

REPORT OF SUBCOMMITTEE ON GAS-WELL DELIVERIES, N. C. McGowen, United Gas Pipe Line Co., Houston, Texas.

TECHNICAL PAPER, R. M. Conner, Director, A. G. A. Testing Laboratories, Cleveland, Ohio.

THURSDAY MORNING, MAY 12

Chairman—Robert W. Hendee

"WILL A WIFE TELL HER HUSBAND?" Davis DeBard, Stone & Webster Service Corp., New York, N. Y.

"THE GAS INDUSTRY'S STAKE IN AIR CONDITIONING," L. R. Boulware, Vice-President, Carrier Corp., Syracuse, N. Y.

"HOW CAN WE FURTHER ENTRENCH INDUSTRIAL AND COMMERCIAL GAS SALES," Franklin T. Rainey, The Ohio Fuel Gas Co., Columbus, Ohio.

REPORT OF SUPPLY MEN'S FUND COMMITTEE.

REPORT OF WRINKLE AWARD COMMITTEE. REPORT OF COMMITTEE ON FINAL RESOLUTIONS.

THURSDAY NOON, MAY 12

Natural Gas Dept., A. G. A.—Member's Council, New Orleans Asso. of Commerce

HOME PLANNING LUNCHEON SYMPOSIUM Presiding—Herman Russell, Rochester Gas & Electric Corp., Rochester, N. Y.

ADDRESS OF WELCOME, Wm. J. Gusto, Chairman, Member's Council, New Or-

leans Association of Commerce, New Orleans, La.

"HOW THE FEDERAL HOUSING ADMINISTRATION SMALL HOUSE PROGRAM BUILDS LOAD FOR GAS UTILITIES," Bruce Wilson, Director of Information, Federal Housing Administration, Washington, D. C.

THURSDAY AFTERNOON, MAY 12

Chairman—Robert W. Hendee

"THE EFFECT OF PIPE LINE STORAGE AND OPERATION OF SOURCE OF SUPPLY UPON TRANSMISSION LINE CAPACITIES DURING HIGH DEMAND PERIODS," L. T. Potter, Lone Star Gas Co., Dallas, Texas.

"LIQUEFIED PETROLEUM GAS SALES," J. Woodward Martin, Lone Star Gas Co., Dallas, Texas.

DISCUSSION, E. Q. Beckwith, Manager, Phillips Petroleum Co., Bartlesville, Okla.

Manufacturers To Hold 3-Day Convention in May



Merrill N. Davis

Davis, executive vice-president of S. R. Dresser Mfg. Co., Bradford, Pa., is president of the Association.

The program committee under the direction of John A. Fry, president of the Detroit-Michigan Stove Company, has planned a schedule of events that promises to make this year's convention colorful and entertaining. The main social event of the convention will be the banquet and dance to be held on the evening of May 26. Professor Dyer, of Vanderbilt University, noted humorist, will be the guest speaker at this function.

Representative Bruce Barton, of New York, who, through his one-man campaign to "repeal ineffective and obsolete laws" is receiving nationwide attention, will be a chief speaker at the closing general session.

Following the opening address by President Davis, N. C. McGowen, president of the American Gas Association, will describe the cooperative relationship which exists between the two Associations. Major Alexander Forward, managing director of the A. G. A., also will speak at the opening session.

C. W. Berghorn, managing director of

LEADING manufacturers from all parts of the country will gather at the historic Greenbrier Hotel in White Sulphur Springs, West Virginia, for the three-day annual convention of the Association of Gas Appliance and Equipment Manufacturers beginning May 25. Merrill N.

the Association of Gas Appliance and Equipment Manufacturers, will review the Association's activities during the past year.

During the first day's session an address will be given by Hugh H. Cuthrell, president of Gas Exhibits, Inc., in which he will inform the delegates of the prominent part that gas and the gas industry will play at the New York 1939 World's Fair.

Among the guest speakers at the convention will be Bruce A. Wilson, director of the Division of Education of the Federal Housing Administration. He will discuss the extensive program which the government is conducting to stimulate reconstruction and general modernization of homes throughout the country.

The activities of manufacturers on the Pacific Coast will be reviewed by R. G. Logue, vice-president of the Ward Heater Company, of Los Angeles, Calif.

This year's nationwide gas refrigeration campaign, which is being sponsored by the A. G. A. E. M. in cooperation with the A. G. A., will be the subject of a talk by F. E. Sellman, treasurer of the A. G. A. E. M., and vice-president of Servel, Inc.

H. N. Ramsey, president of the Welsbach Company, of Gloucester, N. J., will report on the "Prize Parade," the current promotion campaign being carried on by the Association for the sale of gas water heaters.

H. P. Mueller, of Milwaukee, Wis., chairman of the Association's Gas House-heating and Air-conditioning Equipment Division, will discuss the sales of gas house heating appliances.

The Certified Performance Gas Range Program soon to be launched by the Association will be outlined by W. E. Derwent, vice-president of the George D. Roper Corporation, of Rockford, Ill.

Demonstration Homes Prove "Gas Is Best for Four Big Jobs"

With the nationwide architects' and builders' programs of the A. G. A. Home Appliance Planning Bureau now in full swing, to be followed by the building of all-gas demonstration homes in all parts of the country, Mr. Swenson's observations on the Chicago demonstration homes are especially timely and significant. In this article he answers many of the questions which will confront companies planning similar homes.

A SALES argument like an advertising phrase must be repeated over and over to be effective. Doubly potent is that argument which can be demonstrated in actuality and not merely expounded. The average person is not gifted with a flexible imagination and possesses no sense of visualization. But present a picture that does not tax the imagination and you have a listener to your sales story.

The idea of selling gas appliances and gas service through actual showing in a Demonstration Home is by no means new, but new perhaps is the manner in which The Peoples Gas Light and Coke Company of Chicago built three Demonstration Homes to tell the selling arguments of gas, especially in new home territories.

No one needs to dilate on the attention appeal of Model Homes. Every home-minded person is delighted to take the time to inspect any so-called Model Home, no matter how much of a misnomer the appellation may be. Doubly delighted they are when the name is justified.

The future of gas appliance sales is closely tied with the future of home building. What goes into a new home is accepted as modern in the usual interpretation of the word. The new home in any neighborhood establishes a standard by which all other homes are judged. It is a curious fact that the keeping-up-with-your-neighbor spirit is a trait so pronounced that to ignore it is equal to social suicide. It is also a buying incentive of no mean potency.

Any promotional enterprise of the dimensions required for building one or more actual homes for demonstra-

By **HARRY SWENSON**
The Peoples Gas Light and Coke Co.,
Chicago

tion of appliances is a venture. The success of it can be determined only after its completion. But since any undertaking in which there is public interest is likely to succeed the risk of failure is almost nonexistent.

The fact that home building is in the doldrums makes public interest in new homes no less active. The scarcity of new homes to inspect contributes just that many more visitors to the home open for inspection. The circumstance of this scarcity makes the visit to a Model Home one of novelty and keener interest.

It is not too optimistic to hope that the long delayed nation-wide building program will begin in the not far distant future. In the meantime all who have anything to sell that goes into a home must talk about it, show it, and preferably demonstrate it.

This thought motivated The Peoples Gas Light and Coke Company to construct three Demonstration Homes in three new sections of Chicago. Each home is in a certain price class, each appeals to a certain group and all are particularly suited to the neighborhood selected. Each home is commensurate in value with other homes in the same locality and in proportion to the

cost of the lot upon which it was built.

It was planned that these Homes should not be mere showcases for the appliances displayed but real life-size, livable homes designed for happy living. Each home was designed to be a convincing proof that gas does all four jobs better and that the mechanical operation of such a home can be successfully automatic.

Public Interest High

No cleverness, chilling smartness or misplaced functionalism was allowed to detract from the feeling that goes with the word Home. Friendliness, warmth and cheer should dictate the impression. It appears that the theory is correct. Although the Homes were completed in mid-winter, presumably the least desirable season of the year, record crowds greeted the openings and record crowds continue to go through the doors.

There are numerous angles to consider in planning exhibit homes. Not the least important is the choice of exterior design. It must be modern

Mr. Swenson enjoys solitary comfort in the recreation room of one of Chicago's all-gas demonstration homes





Living room—Beverly Home



Basement recreation room—Galewood Home

Recreation room—Edgebrook Home



without being startling, in taste, yet of general appeal. Above all it must be a design suitable to advantageous presentation of the sales story.

The average home builder is on the conservative side. The untried, the novel seldom gets his approval, the fantastic or unusual has no place at all in his scheme; certainly not in his final choice. In viewing a Model Home he assumes the role of owner, thinks in terms of owner and judges as an owner. The favorable impression we hope for on the inside of the home must begin on the outside. The exterior then is all important.

No home design has been more generally popular than the home built with Colonial characteristics. No design has better stood the test of time. Surveys conducted in Chicago and elsewhere indicate an overwhelming preference for homes of distinctly American character in type and plan with architectural contours suited to climate, topography, and mode of living.

The three Homes are therefore of Colonial inspiration but all are as modern as today. Built with a respectful eye on all that is good in tradition but with a feeling for that which is fresh and modern, these Homes are examples of good taste, gracious living and show with emphasis the contemporary luxury of Gas Service any home can afford to have.

Advantages of Independent Building

Building a demonstration home as a cooperative enterprise has many advantages. Building independently has more. These Homes were built independently in our way, and to our way of thinking. There were no restrictions beyond the monetary to cramp or dwarf the plan. No commitments or tie-ups were present to distort the fundamental purpose. Property was bought, architects selected and contractors chosen in exactly the manner of any individual going about the same business.

Lots were selected, not where the district already showed an acceptable saturation of Gas but in such neighborhoods where new construction was imminent and where future growth was indicated. Since these Homes will ultimately be sold, consideration was given

Gas heating unit and water heater in the basement of Galewood Home



to all angles usually facing one selecting a home site.

Three architects of established reputation and sympathetic to our plan were given the job of designing the Homes in cooperation with the Home Planning Bureau of The Peoples Gas Light and Coke Company.

Public interest was evinced the day construction started. No general advertising was done at that time and no elaborate advertising program has been required since to give impetus to visit the Homes. Actually more people come than is desirable from the standpoint of being able to tell our story in the manner we prefer to tell it. In each Home five attendants, one of whom is a Home Service girl stationed in the kitchen, are required to handle the crowds on week-ends.

Kitchens and Basements Most Popular

The Homes are decorated in the best of taste and furnished by a neighborhood merchant. While the furnishings are complete they are not lavish and though all parts of the Homes are interesting and worthy of study, we find as planned, that the kitchens and basements are the most popular parts of the Homes. The kitchens are what they ought to be, not only functional but livable and the basements are rooms of comfort, charm and relaxation.

The basements are simple with no attempt at elaboration or make-believe; decoration has been designed to support the equipment rather than obscure it. Good planning proves that this quarter of the home can be a valuable addition to the living space. The utility part of the basement housing the heating system, water heater and incinerator prove the attractiveness of these appliances when rightly placed and that pipes and ducts can be "tailored" to sightliness.

No unusual or untried material was wrought into the buildings, nothing startling or unique to detract from the main focal points. Rather, the entire attraction is based on practicability, good taste and a recognition of features demanded in today's home.

The secret of the universal appeal of these Homes can be summarized in the fact that no feature, detail or



Kitchen—Edgebrook Home



Kitchen—Galewood Home

Gas heating unit, incinerator and water heater in the basement of Beverly Home

Home

Corner of recreation room—Beverly Home





Galewood Home



Edgebrook Home



Beverly Hills Home

treatment allows a negative argument. They are designed to appeal to the average person, not to a selected few. Neither do these Homes battle the cause for any certain type of construction material or practice, all eloquence is used to further the object of the promotion.

Mindful of the charm of color and the interest value of decoration, these mediums have been used to full advantage. Good planning and the addition of the many little niceties expected

in a well-planned home add to the interest and beauty of the buildings. Details have "conversation value" and are in considerable measure responsible for the constant flow of visitors and the enthusiastic remarks. It is surprising to note the astounding number of men and women who, in these Homes, make their first acquaintance with really Modern Gas Equipment, people who, in spite of all advertising and promotion, have only a faint notion

of the advancement of appliance design.

Realtors and Builders and Trades are unanimous in the opinion that the building of these Homes has exerted a beneficial influence in the respective neighborhoods. There can be no more convincing proof of the superiority of Gas Service and the beauty of Gas appliances than these effective *All-Gas Homes*. They also prove a sense of merchandising vision and a degree of enterprise not at all misplaced in a time of general inertia.

Gas Industry Accident Injury Rates Drop in 1937

A GROUP of 480 gas utilities reporting to the A. G. A. Statistical Department and representing more than 84% of the manufactured and natural gas industry in the United States had a frequency rate of 13.8 disabling injuries in 1937 for each million man hours of exposure. This represented a decrease of 10.4% over the frequency rate of 15.4 reported by gas companies for the year 1936. This was the

sharpest decline in the frequency rate reported by gas companies since 1932.

These same gas utilities also reported a severity rate of 0.93 days lost in 1937 for each thousand man hours worked, a decrease of 24.4% from the severity rate of 1.23 reported for 1936.

Complete Information is included in Statistical Bulletin No. 29.

Table I, of that Bulletin, shown below,

presents a nine year summary of accident experience of the manufactured and natural gas industry in the United States. It will be noted that for the manufactured gas companies the frequency rate dropped to 12.7 in 1937, a decrease of 9.9%. Natural gas companies also showed a decrease in the frequency rate, which dropped to 15.2 for this group in 1937, or 12.1% below the figure reported for 1936.

The severity rate for manufactured gas companies fell from 0.92 in 1936 to 0.86 in 1937, a decrease of 6.5%. For natural gas companies the severity rate decreased from 1.68 in 1936 to 1.02 in 1937, a decline of 39.3%.

NINE YEAR SUMMARY OF ACCIDENT EXPERIENCE OF THE MANUFACTURED AND NATURAL GAS INDUSTRY IN THE UNITED STATES

These data cover the entire operations of reporting gas companies and the operations of the gas department only for combination companies

Year	Number of Reporting Companies	Number of Deaths and Permanent Total Disabilities	Total Number of Disabling Injuries (Lost Time Accidents)	Total Days Charged Due to Disabling Injuries (Lost Time Accidents)	Frequency Rates		Severity Rates		Number of Deaths and Permanent Total Disabilities per 100 Employees
					Number of Disabling Injuries per 1,000,000 Hours Worked	Number of Disabling Injuries per 100 Employees	Number of Days Charged Due to Disabling Injuries per 1,000 Hours Worked	Number of Days Charged Due to Disabling Injuries per 100 Employees	
1929	354	33	6,218	304,510	30.5	7.60	1.49	372.0	.0403
1930	449	53	5,801	475,665	21.3	5.33	1.75	437.0	.0487
1931	453	35	3,859	302,093	16.1	3.93	1.26	307.5	.0356
1932	443	50	2,690	382,443	11.9	2.85	1.69	405.3	.0530
1933	473	23	2,575	197,669	11.5	2.56	0.88	196.9	.0229
1934	422	22	3,260	223,864	14.7	3.04	1.01	208.9	.0205
1935	458	31	3,073	290,017	13.8	2.90	1.30	273.9	.0293
1936	457	30	3,616	288,378	15.4	3.28	1.23	262.0	.0273
1937	480	24 1/5	3,348	225,698	13.8	2.93	0.93	197.7	.0212

The Odorization of Natural Gas in the Southwest

PART I

THE odorization of natural gas has been receiving considerable attention from all gas company operators in the Southwest recently, and this interest has been brought about principally by the enactment in 1937 of the law in Texas requiring that all natural gas served in cities and for domestic purposes be treated with a warning agent. I shall not attempt here to give the history and early development of odorization. Much interesting information has already been recorded in various publications during the last few years.

Texas Law

Following enactment of a law requiring that natural gas be odorized, the Railroad Commission of Texas issued their rules, regulations, and order, effective July 27, 1937, outlining the manner in which gas companies should odorize their gas. Some of the more important requirements of the rules and regulations are that:

1. Odorization is not required for gas used in natural gasoline extraction plants, carbon black plants, natural gas gathering lines, in repressuring gas wells, or gas used in lease and field operations such as firing engines and boilers used for drilling, gas engines in compressor stations, and other similar uses. However, all domestic gas used in lease houses, offices, warehouses, camps, etc., must be odorized.
2. All gas conveyed by pipe lines within the limits of any city or town for purposes of distribution and sale in said city or town shall be odorized; but odorization of the gas in the transmission lines outside cities is not required by the order.
3. The malodorant agent used must be harmless and neither toxic or nauseating; it shall be non-corrosive to steel, iron, brass, bronze, or leather, and it shall be insoluble in water.
4. The products of combustion from the malodorant shall be such that they are neither toxic nor nauseating to a person breathing air containing these products of combustion, and the products of combustion shall also be such as not to cor-

By E. L. HENDERSON

Chief Engineer, United Gas Corp., Operating Division, Houston, Texas

- rode or be harmful to the normal materials with which these products of combustion would come in contact in places where the gas is burned.
5. The malodorant agent to be introduced into natural gas shall be of such character as to indicate by distinctive odor the presence of gas when such gas is present (mixed with air) in concentrations of not greater than 1% by volume.
 6. Plans and specifications of equipment, as well as specifications of the odorant and amount of odorant to be introduced, must be approved by the Commission.
 7. All gas consumers must be notified in writing at least three days prior to the beginning of introduction and continuous use of malodorant.
 8. A report of statistical data regarding the first 60 days of operation must be prepared for the Commission.
 9. Quarterly reports are prepared for the Commission showing type and quantity of malodorant used.

The Railroad Commission in their administration of this order have been very reasonable and willing to cooperate with the gas companies in every way possible to enforce the order in a practical manner.

Warning Agents Used

The reports and statistics which are being received by the Railroad Commission present some interesting facts regarding the practice in Texas. Their records show that the following warning agents are being introduced into natural gas:

1. Calodorant—a complex mixture of hydrocarbons and organic sulphur compounds manufactured by the Standard Oil Company of California.
2. Pentalarm—composed principally of amyl mercaptan, manufactured by the Sharples Solvents Corporation.
3. Ethyl mercaptan.

A few wells in Texas produce natural gas with sufficient sulphur content that the odor has been approved by the Railroad Commission without any warning agent being added. All companies except one use either Calodorant

or Pentalarm. At Port Arthur there are large oil refineries from which vapors so permeate the atmosphere with an odor similar to gas or gasoline that it was considered advisable to use ethyl mercaptan as the warning agent. The odor of ethyl mercaptan is not nearly so similar to the ordinary oil refinery odors as those of Pentalarm and Calodorant.

For the quarter ending December 31, 1937, the reports showed Calodorant was used at an average concentration of about two gallons and Pentalarm at an average concentration of about one pound per million cubic feet. Ethyl mercaptan was used in Port Arthur at a concentration of 1.03 pounds per million cubic feet.

Leakage Reported

The reports received from the companies regarding their first sixty days of operation after beginning odorization showed that for thirty-eight companies serving 308 towns, comprising approximately 187,000 customers, complaints were received from customers which resulted in the repair of the following number of leaks:

Mains	121
Service Lines	625
Meters and Loops	1,798
House Piping	4,350
Appliances	8,199
Total	15,093

These figures do not represent all companies, but do give a cross-section of what can probably be expected on the average. This shows that one leak was reported for each 12.4 customers.

Quoting from a recent paper by Mr. Culberson, director of the Utilities Division of the Railroad Commission:

"It has been the policy of the engineers of the Commission to approve all types of equipment that have shown any promise at all, with the reminder to the persons submitting them that it is the resulting odor that will be tested. The final test . . . will be the odor of the gas. . . . Instead of using complicated apparatus for mixing the gas and air in proper propor-

* Presented at A. G. A. Distribution Conference, Cleveland, Ohio, April 4-6, 1938.

tions the test will be made in a closed room by admitting the proper percentage of gas and having a number of disinterested witnesses certify as to its odor."

In November, 1937, the Commission ordered all gas companies to conduct room tests in each community which would show the amount of gas necessary to be admitted into a room in order for the odor to be readily detected. In most instances five witnesses were used and a procedure followed which showed the per cent relation of the volume of gas to air in the room. Several hundreds of these tests have been reported, and although there is considerable variance in the results, in the majority of cases a gas-air mixture of from one-tenth to two-tenths of one per cent was readily detected by the witnesses where Calodorant was used at two gallons and Pentalarm at one pound per million cubic feet.

Safety Factor

The natural gas which we distribute is explosive when mixed with air in a proportion of 4% and more. These figures seem to indicate that we are, operating at a very comfortable factor of safety. Upon investigation we find that most companies in the Southwest are using the warning agents in about the same concentrations as stated above.

It is generally agreed that the benefits of routine constant odorization accrue principally in protection to our customers. Although leaks in the street are frequently detected by smell, the cost of odorization cannot be justified from this standpoint alone.

During the progress of special leakage surveys an extra-high concentration of odor is desirable and of considerable assistance to the men conducting the work, particularly if favorable weather conditions prevail. In bright sunshine or wind the street leaks are not nearly so easily detected as on still, cloudy days. Where extra-high concentrations are used to aid in the detection of street leaks, difficulty is sometimes encountered in unimportant leaks being reported on customers' premises. It is therefore advisable to inject the additional amount of the warning agent only into the gas serving the relatively small area in which the crew is working, thus reducing materially the number of complaints received.

In large natural gas systems comprising long transmission lines and many distribution plants, the question arises as to the most advantageous point or points at which to introduce the warning agent. Placing a few large stations on the transmission lines makes the initial investment as well as operating and maintenance problems considerably less than if a large number of small installations are constructed and operated at each of several distribution points.

Treating Industrial Gas

Where the amount of gas sold to large industrial users represents a relatively small proportion of the total, large stations odorizing the gas in the main transmission lines are desirable. However, if large volumes of gas are being delivered to industrial users where odorized gas is not required, the saving represented by not treating this gas often will warrant the installation and operation of a large number of smaller stations at each of many distribution centers.

Within distribution plants it is frequently possible to inject the malodorant at a point or points so that the gas distributed to domestic customers can be properly odorized without the expense of treating the gas used by large industrial consumers. Although this practice is advisable from an economy standpoint, if the lines carrying gas to the large industrial users are located in downtown paved areas there is probably justification for odorizing the gas to insure more prompt discovery of leaks in the street.

According to the present practice in the Southwest, Calodorant and Pentalarm are costing less than one dollar per million cubic feet of gas treated. This cost can be justified by the protection which it affords to life and property as a warning agent, preventing serious fires and explosions from the ignition of escaping unburned gas.

Aside from the protection which it affords customers, odorization is of distinct benefit to the company in a financial way through the elimination of damage costs and lawsuits resulting from explosions and accidents which might occur if escaping gas were not so easily detected. Leaking house lines are usually discovered and the leaks

are often repaired before enough gas has escaped to cause a serious high bill complaint, resulting in better customer relations.

Odorization has been an important factor in helping to sell natural gas as a safe and economical fuel. The fact that a warning agent is present in the gas is of considerable importance to the customer who might otherwise have fears regarding the safety of gas service.

In the concentrations employed, the gas contains the odorizing agents in a quantity resulting in a sulphur content of the treated gas of considerably less than one grain per one hundred cubic feet. It is the general opinion that sulphur in this amount will not produce any harmful effects.

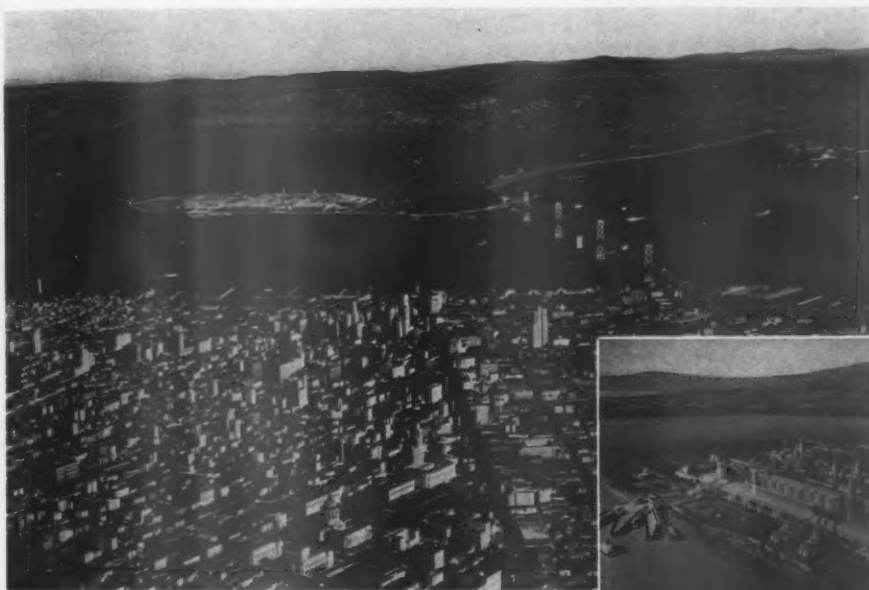
The odor of Pentalarm may be successfully destroyed by using a solution of one-half pound of hypochlorite of soda and one-half pound of soda ash, each dissolved in one gallon of water. The two chemicals should be dissolved separately. A wash of equal parts of the two solutions should then be prepared when needed. The odor of Calodorant may be destroyed successfully by the use of ordinary vinegar. Frequently it is necessary to remove the odor from articles upon which the malodorants have been spilled. When it is necessary to release vapors, some companies use a vessel through which vapors are bubbled so that the surrounding atmosphere will not become contaminated.

(The second part of Mr. Henderson's paper, describing apparatus in use in the Southwest, will appear in a later issue of the A. G. A. MONTHLY.)

Natural Gas Standby

WORK done by gas engineers during the past several years in perfecting a manufactured gas which can be substituted for natural gas in an emergency was amply justified during the February storms which visited Southern California. The natural gas transmission line supplying San Diego was washed out in two places, and was out of service from 7:00 P.M., Wednesday, March 2, to 2:15 A.M., Saturday, March 5. But for the fact that the company maintains a stand-by manufacturing plant ready to go into service on a few hours' notice, San Diego would have been without gas service.

While line repairs were being made the plant made 25 million cubic feet of diesel oil gas and gas service was maintained without interruption.



At the left is shown the 400-acre island which was built especially for the 1939 Golden Gate Exposition. Below is an elaborate scale model of the Fair



Treasure Island— America's World's Fair on the Pacific

CALIFORNIA and San Francisco are names which signify frontier and romance to most Americans. California, the state over which four flags have flown, the state of the nation's lowest desert, the highest mountain, and the biggest trees; San Francisco, the port of gold, the gateway to Cathay, the city of good living—for these things and many others California and San Francisco are known and loved throughout the world.

Natural Gas Territory

Prime vacation land as it is, California also has a serious side. It is one of the nation's largest and richest markets. The diversification of its resources is particularly remarkable. It is an agricultural state but also rich in lumber, minerals and oil. The motion picture is perhaps its best known manufactured product, but it is also important in rubber, aircraft, furniture, steel and clothing.

California is one of the leading producers of natural gas and its entire

By **CLIFFORD JOHNSTONE**

Managing Director, Pacific Coast Gas Association

production is consumed by homes and industries within the state. This high development of the natural gas business has encouraged the manufacture of gas appliances. Ranges, water heaters, furnaces, direct heaters and industrial appliances and burners are manufactured in the state in large quantities. Notwithstanding this, the Pacific Coast remains an important market for eastern appliances and nearly all national manufacturers maintain branches in one or more Pacific Coast cities.

Conceived originally to commemorate the completion of two of the world's greatest bridges, the Golden Gate International Exposition was first planned for 1938. The magnitude of the job defeated this schedule so the opening was set forward until 1939. The Federal Government has given the Fair official status as America's World's Fair on the Pacific, and the work of

financing, planning and building has gone forward with true western vigor. It will open on February 18, 1939, and close on December 2, 1939.

Fair Site Unique

Like the California weather this Fair will be unusual. In the first place its site is unusual. An island had to be built for it. Between San Francisco and Oakland, stretches the San Francisco Bay, now spanned by the seventy-seven million dollar San Francisco Bay Bridge. Near the center of the Bay is Yerba Buena Island through which the bridge roadway tunnels. North of the Island, where once was a shoal covered to an average depth of nine feet, has been dredged a new island connected by causeway to Yerba Buena and the bridge to San Francisco and Oakland. "Treasure Island," as it is called, has long since been completed, a level 400-acre rectangle 13 feet above high tide.

The most unusual thing about the Fair will be its compactness and the next its architecture. Just as the site

is easily accessible to population centers so can all parts of the grounds be reached without undue fatigue. There are three permanent buildings on the Island, one to serve as an airport headquarters after the Fair and two as huge hangars to house the planes; for this island is to serve as San Francisco's uptown air terminal in future years. The main exhibit buildings will be huge, massive structures enclosing a central concourse which will be in appearance something like an ancient walled city. The buildings will be windowless with long horizontal lines, setbacks and pyramidal forms suggestive of ancient Mayan or Incan architecture. Color will be rampant, but it will be blended to match the natural colors of the flowers, shrubs and trees which will be everywhere.

Gas Distribution System

Treasure Island will be supplied with natural gas purchased by the Fair management from Pacific Gas and Electric Company. Bringing this gas to the island was a major construction problem involving a submarine pipeline from the mainline across a busy channel. The gas will be delivered to the island distribution system at 10 pounds pressure and consumption is estimated at 200,000 cubic feet per day. Passing through a master meter before entering the Treasure Island distribution system, the gas will be carried through four-inch mains with branches along Exposition streets and avenues to seven cross-connected loops. The entire system will require 5,500 feet of 4-inch pipe; 1,000 feet of 3-inch; 5,800 feet of 2-inch; 6,700 feet of 1½-inch, and 6,700 feet of 1¼-inch pipe—a total of 25,700 feet.

Plug outlets for taps, 1¼ inches in diameter, will be spaced every 60 feet along the distribution lines. Meters and reducers, located just outside the consumer's premises, will measure the gas at pressures according to the individual requirement, generally about 6 ounces at the outlet.

Taps enter each of the main exhibit halls at strategic points, and exhibitors and concessionaires everywhere on the island will find themselves located over one of the loops. Standard threaded black steel pipe and cast-iron fittings will be used throughout the system,

which will be equipped with a total of 13 shut-off valves.

At the present time 15 states have made appropriations for participation and eleven others have appointed Commissions to plan participation. Twenty-two foreign nations are already enrolled. There will, of course, be exhibits of art, science and agriculture, and there will be music and strange Oriental drama. There will be the usual fun zone, but it will be more exotic than usual, and San Franciscans all hope it will be named "The Barbary Coast" and live up to it.

Another feature of the Fair will be its industrial exhibits. In addition to an imposing list of large national manufacturers who will show their specific methods and products there will be a number of cooperative exhibits covering whole industries. For instance the utilities and natural resource industries of the eleven Western states are cooperating with W.P.A. in the construction of a huge relief map with overhead walkways which will portray the agriculture, the forest and the mineral wealth of the great West. On the map will be shown mines, power plants, oil fields, electric and gas transmission lines.

The oil industry is cooperating in an exhibit telling its story in a far more comprehensive manner than if each company were to exhibit separately. The same is true of lumber and transportation. The railroads are contributing "Vacationland" and the mining industry "Treasure Mountain."

Colorful Gas Exhibit

Not to be outdone by other major industries the gas industry will occupy some 8,000 square feet in the Homes and Gardens Building adjacent to the two main entrances. The gas exhibit will be managed by the Pacific Coast Gas Association and will be devoted to a colorful presentation of domestic uses of gas. Preliminary financing of this exhibit has already been completed and the space purchased. Several alternative exhibit plans have been considered.

Complete details of one of these plans, worked out in color, are now being prepared for the final approval of the committee in charge. This committee is representative of both the

utility and appliance manufacturing branches of the industry. Its chairman is R. E. Fisher, vice-president in charge of sales of Pacific Gas and Electric Company. The utilities are further represented by H. L. Farrar, president, Coast Counties Gas and Electric Company, and R. A. Hornby, vice-president, Pacific Lighting Corporation. Manufacturers are represented by C. R. Graham, of Jas. Graham Manufacturing Company, chairman of the P. C. G. A.'s Manufacturers' Section; H. R. Basford, president, H. R. Basford Company, and a past president of P. C. G. A.; and Don Fleming, Payne Furnace and Supply Company.

Some Building!

The United States annually consumes enough natural gas to fill a building 100 miles long, 100 miles wide and 9 miles high.

Interesting Facts about New York Utility

INTERESTING facts on the utility business in New York City appeared in an article in the New York Sun, Mar. 26, entitled "Current for the City's Lamps." The article pointed out in a sub-head that 5,605,309,888 kw.hr. of electricity and 37,995,126,000 cu.ft. of gas were consumed for heating in 1937.

Part of the article reads: "Offhand, that much-publicized medical apparatus, the 'iron lung,' would seem far removed from the general subject of current for the lamps of New York. But the connection is a close one, and here is just how close it is: There are thirteen Drinker respirators, to give the 'iron lungs' their formal name, in municipal hospitals, which thirteen were gifts from the Consolidated Edison Co. of N. Y. These were not random benefactions: the company had an interest in them close to the proprietary. With its great gas and electric interests, it has necessarily been concerned for many years with the problems of asphyxiation, shock, and artificial respiration," etc.

Stating that in round figures the company has 40,000 employees, it speaks of four of these employees as "subway sniffers" who ride the subways in day and night shifts, their noses alert for an odor of gas to check leaks. It also speaks of the "mud-slingers" whose one task is to plaster clay oven doors in gas plants with clay to seal them completely, and tells of three full-time "smoke watchers" who keep their eyes as constantly as possible on the stacks of generating plants, a final precaution after many elaborate mechanical ones against emission of clouds of smoke.

A Credit Union Is Successful in a Large Gas Company



Leslie P. Bruce

SEVERAL years after the now historic depression and before the present "recession," a representative group of employees of the company was seeking a plan that would not only

provide them with a safe depository for savings and the assurance of some income therefrom, but also with a source from which funds could be borrowed to meet temporary financial difficulties without too great cost to the borrower.

It should be borne in mind here that more than ninety per cent of the people in the United States do not have "bank credit." In times of financial distress, many of the ninety per cent are, of necessity, driven to the loan agencies for funds to meet their needs, paying an average interest charge of three and one-half per cent a month. In many instances they become victims of loan sharks.

A recent investigation by the courts of a large city revealed the case of a man who had borrowed thirty dollars from a loan shark. In four years he was said to have paid back eleven hundred dollars, and "believe it or not" he still owed the original thirty dollars! I have personal knowledge of some of my own fellow-employees who borrowed ten dollars two or three days before payday and paid one dollar for the use of the money, or ten per cent interest for three days.

With these facts in mind, our group investigated the credit union plan and found it to be a cooperative society under state supervision, organized within a specific group of people, as a lodge, church, limited community, or employees of a company for a two-fold

By **LESLIE P. BRUCE**

*The Peoples Gas Light & Coke Company,
Chicago, Ill.*

purpose: first, to help form the thrift habit, and second, to be of service in the form of providing credit, with a nominal interest charge, to those of its members from time to time in need of financial assistance.

That was the type of plan the investigating group was seeking and the credit union was accordingly incorporated and began operations January 14, 1935. Deposits to share accounts

On January 14, 1935, a group of employees in the Chicago company formed a cooperative society with a two-fold purpose: first to help form the thrift habit, and second, to provide credit, with a nominal interest charge, to those of its members in need of financial assistance. This interesting report of its three years of operation has been contributed by the Association's Committee on Personnel Practices. It is worthy of consideration as a practical contribution toward the welfare and happiness of company employees.

(savings) were accepted and, within the first week of operation loans were made. More than half of the two hundred forty-four loans granted during the first month were for the purpose of paying off loans previously made at outside loan agencies, with a consequent saving to the borrowers. It became evident immediately that the credit union was an answer to the needs of many of our co-workers.

The low interest cost of one per cent a month on the unpaid balance makes it possible for members to expand their purchasing, often at a discount for cash rather than on the more costly installment plans. This same low cost also makes it possible for the borrower to repay the principal more quickly, brings relief to the worried and distressed mind, and makes better and more efficient employees for the company. In addition to these advantages,

another benefit is derived in the form of dividends on savings in share accounts. After three years of operations, annual dividends averaging almost five per cent have been declared and paid to shareholders of this particular credit union.

An analysis of membership, savings, and loans shows more clearly the growth of this successful credit union.

In the three years of operation the membership has increased twenty-five per cent. The average savings balance for 2212 members is \$105. Loans outstanding to 1170 members (52% of total membership) average \$132 and total savings are 34% greater than total loan balances.

Interest paid on loans by borrowers since the date of incorporation totals \$30,800. If the same amount of money had been borrowed for the same period of time at a legal rate loan agency, the interest charge at three and one-half per cent a month, would have amounted to \$107,900. These figures indicate that the credit union

effected a conservatively estimated saving of \$77,100 in interest costs alone. This saving does not include \$18,000 returned in dividends during the same three years. Thus, through the operation of the credit union the "buying power" of its members was increased by upwards of \$95,000.

The success of a credit union is predicated on the careful management of its affairs; also, on the inherent honesty of the average working man or woman. Having made a loan from a credit union, they realize that they are using money belonging in part to themselves and in part to their friends and co-workers, and they have no desire or intention of welching on those who are materially helping them. Records of credit unions operating the world over for almost one hundred years show losses of less than one

(Continued on page 200)

Selling Gas Heating to New Homes



W. D. Smith

BEFORE any discussion can be given to the sale of a product it must be determined whether or not there is a market that can be reached. Statistics show that there is a very definite market

for gas heating in new homes in all price brackets and that it offers a wonderful opportunity for the gas industry to obtain new business.

Figures from various cities show that gas heating is becoming more popular for new homes, but let us take some data that was recently collected in Pittsburgh. During 1937, 35.6% of the homes built on the lines of one gas company were gas heated and this includes all brackets. In the higher price class, over \$12,000, 90% of the new homes were gas heated. As a matter of interest the average cost during 1937 for each new home was \$6,593.

A Sales Opportunity

I would like you to think about these figures and realize what a fine market has been developed but more important, what a sales opportunity now presents itself to all of us. Why did the owners of these new homes select gas for heating? Simply because someone educated them on the many advantages and benefits of gas heating and if you fellows who are commissioned to put this story across had interviewed the 64.6% of those who did not specify gas and given them the true and complete story the percentage of those using gas would have been much closer to 100%.

You may say to yourself that in selling gas to new homes you may have as many as four complete sales to make. Not only the owner must be convinced but the architect, the general contractor and the heating contractor must all agree. Perhaps this is true

By W. D. SMITH

Bryant-Smith, Inc., Cleveland, Ohio

in some cases and that is our job. However, in my mind, the man to concentrate upon is the owner.

Put yourself in the role of the prospective home owner who is about to invest a large sum of money and undertake one of the major steps of his life—building and living in his own home. Naturally, he is going to study and weigh every part of the plans and specifications to be sure to obtain value received. Now you men are the ones to guide him in regard to the heating for his home because he does not know, as you do, that gas heating gives him the most for his money and is the major source of health and comfort during the long winter months in this section of the country.

More Advertising Needed

The benefits of gas heat are as familiar to you as your daily routine, but do you tell them so that the listening mind of your prospect will realize their importance? Do you advertise in the many media that will force appreciation of gas heat on prospective customers as well as spread the information by word of mouth?

I have heard it said many times that we dare not go over the architect's head to the owner or we will lose caste and maybe lose the architect's next job. Are we sure that is not an alibi in many cases? The architect has an important place in the picture, to be sure, but if you sell him on gas heat as you should he will not only favor your call on the owner but help you to sell. Let's regard the architect as a friend and an ally rather than an obstacle on your road to successful selling.

Now, the architect, the general contractor, the heating contractor, and speculative builder, all have a definite interest in the increased use of gas as a heating fuel. Let's consider the architect first. He is a professional man who obtains his business by con-

tact rather than by solicitation. It is imperative that he create owner satisfaction through the plans and specifications he passes on to the general contractor. It is your responsibility to take your story to the architect and point out to him that you have to offer the most economical heating service that he can obtain for his client. Keep in mind that he is a progressive man constantly seeking better ways of doing things because it is in this manner that he obtains prestige.

Tell the architect the full story just as you would the home owner, pointing out to him the testimonials of other users and never fail to tell him of the satisfaction experienced by his former clients who are now using gas for heat. You must have his cooperation and in addition to impressing on him the many benefits of gas heating, you must appeal to his pride and show him how others have benefited by specifying this modern method of heating a home in the most economical manner.

Selling the Architect

The architects of today are almost universally specifying insulation for homes and more and more consideration is being given to storm doors and windows. I have reliable information to the effect that a full insulation job saves about 33⅓% of the fuel cost and a cap job saves from 20 to 25%. By the use of storm doors and windows with insulation savings of close to 55% will be realized. In the light of these trends and developments nothing can prevent increased acceptance of modern, safe, automatic gas heating. Again, I say to you, sell the architect just as you would sell the home owner.

The general contractor receives his prestige, satisfaction, and more business from a job well done; and when you know he has done a good job, tell him about it. Never fail to let him know how well pleased the people are with the work he did on their homes. Tell him how highly the people regard the gas heating plant, and use every opportunity to educate him on the manifold advantages of gas heating.

Again, sell him just as you would the owner and the architect.

Working with the general contractor on almost every job is the heating contractor who, by all means, is an individual to whom you should tell the gas heating story from A to Z. In acquainting him with all the benefits of automatic gas heating you are creating your strongest ally because the home owner, the architect and the general contractor depend on him for advice and counsel as to the most economic way to heat the home. Here in Pittsburgh the method for heating Chatham Village was decided upon only after the architect had consulted with leading heating contractors. If you will make it a point to sell him on the manifold advantages of gas heat as you do the home owner, then he, too, will join with you in educating the users that gas gives a full measure of value received.

In contacting the heating contractor never fail to let him know that he is a most important individual in the construction of a home. He also likes to hear when people are pleased with a job well done and it follows that the more he finds out that gas heating pleases people, the more he will advocate its use to future prospects.

Profit Motive

His purpose in being in business is to realize a good living and a fair profit. Point out to him that gas heating permits him to make more money on a job. Convince him that the neat and attractive appearance possible in a basement which has gas-fired equipment adds to his prestige and takes him out of just the mechanic's class and puts him in the class of an artisan.

That is not all you have to offer the heating contractor and I know you are constantly telling him of the services offered by the gas company, both to him and the owner. You know this relieves his mind a lot because in his bid to get the job he has not included charges for service and adjustment thereafter. This is a saving that he can offer the owner which is further proof that gas heating is low in cost.

And now we come to that individual who weighs every dollar put into the construction of a home. He does this because he is a good business man and

knows that his success can only be assured in proportion to the values he offers home buyers. I speak of the speculative builder. Here is the man who does much to create business by his activity in the housing field just as the manufacturers of automobiles do in their field. In other words, the speculative builder, when active, creates business and imparts a forward movement to the building industry. He is the mass producer. It is the speculative builder who builds most of the houses each year and each and every one of you must realize the importance of contacting him.

Consider for a moment his problem. In order to prevent heavy financial losses he must first study the market for new homes and carefully analyze what the people want or are demanding in new homes today and what they expect to, or are able to pay, for new homes. Then he must find a way to do the job and give the people what they want at the lowest possible cost. Of course you all know that in this whole problem one of his major considerations is how to best heat these homes.

Importance of Speculative Builder

Now you have the very method of heating that people are demanding today and it is your job to impress on the speculative builder every advantageous detail of automatic gas heating, always keeping in mind that he is anxious to know all about complete low cost heating service because it is a major sales mover in disposing of the house. In selling gas heating to the speculative builder every advantage realized by the user is of prime importance to him and so, fellows, give him the complete story and tell him of pleased gas heating customers at every opportunity. He is an important individual—never neglect him.

As an example of the importance of the speculative builder let me tell you of a pleasant interview I had with one here in Pittsburgh. In the South Hills one builder is concentrating on houses he chooses to call the "Utility Home." This is a house without a basement and in 1937 this builder had constructed about sixty of these homes. Each one of these homes are gas heated and all have been sold, eleven in the

past 30 days. The homes are six and seven rooms, some with two baths, garage attached with a utility room for heating equipment and laundry. They are well constructed, brick or stone veneer, with rigid board insulation, selling from \$7,600 to \$9,850.

All these homes are heated by forced air plants and this is what the builder reports: That no home will exceed \$70 or \$75 for the entire annual heating cost and that the highest bill thus far recorded for heating, water heating, and cooking for a month was \$13. He tells me that 99% of the purchasers are not only satisfied but are enthusiastic over the complete heating service at such a low cost. Why are the occupants of these homes so enthusiastic? Because they have less colds and winter illnesses, reasonable cost and all without any attention to the heating problem whatsoever.

The builder further advised me that he had been called to New York to consult with eastern builders as to how it would be possible for them to use gas for heating the same type of home in the artificial gas territory. The gratifying thing is they expect to obtain the desired results by the simple addition of storm doors and windows to the house. This was not a gas heating salesman telling me this; it was a *speculative builder*.

The increasing use of gas for heating in new homes is evidence of a creditable achievement on your part. But there is much more business that can be secured and this means dollars for you. Convince the home owner that he will get more than value received, the speculative builder that he will make money, the architect, general contractor and heating contractor that they will gain prestige as well as profit—and these extra dollars are yours.

Gas Cooking by Braille

There is a house in Brighton, England, where all the cooking is done by a blind man. Recently the thermostat on his cooker was brought into the gas company's workshops, and the appropriate Braille lettering in respect of each number was fitted to the dial head. The thermostat was then refitted and recalibrated, and the consumer is now able, in spite of his handicap, to carry out oven cookery with scientific precision.

400 Engineers Attend Fifteenth Annual Distribution Conference

MORE than 400 distribution engineers and executives gathered in Cincinnati, Ohio, April 4-6, to participate in the fifteenth annual Distribution Conference sponsored by the Technical Section. They were amply rewarded with a program of highly informative papers and vigorous discussions.

H. L. Gaidry, of New Orleans, chairman of the Distribution Committee, presided at most of the sessions. Following his opening remarks, H. C. Blackwell, president, the Cincinnati Gas & Electric Co., welcomed the delegates to Cincinnati. Greetings of the American Gas Association were extended by Alexander Forward, managing director.

At the conclusion of the meeting, a resolution was unanimously adopted by the delegates, expressing their appreciation and thanks to the Cincinnati Gas and Electric Co. and its officers, Messrs. Blackwell, Cherry, Whelpley and others, for their whole-hearted cooperation which contributed largely to the success of the conference.

F. M. Goodwin, Speaker

Pointing out that a knowledge of the other fellow's work would be helpful to the distribution engineer's job, F. M. Goodwin, of Boston, vice-chairman of the Technical Section, summarized the A. G. A. sectional and departmental activities at the opening session. The distribution engineers, he stated, should be conversant with the activities of all of the sections,

the Natural Gas Department, the manufacturers' association, the A. G. A. Laboratories and many of the special committees.

A detailed treatise on the metallography of welding and the importance of training welders was presented by Dr. W. A. Pearl of Armour Institute of Technology, Chicago. Dr. Pearl's paper was confined primarily to the welding of low carbon structural steel, to which classification most pipe, pipe fittings, and tanks belong. This session concluded with the summary of a survey of the operating practice of certain gas companies in the welding field by H. G. Horstman, Public Service Company of Indiana, Indianapolis. Using slides, Mr. Horstman emphasized the methods used in training welders.

The entire afternoon, Monday, was devoted to three parallel Luncheon Conferences, which are discussed in a separate article in this issue of the MONTHLY.

Merrill N. Davis, president of the Association of Gas Appliance and Equipment Manufacturers, addressed the Tuesday morning session, expressing his appreciation for the cooperation the manufacturers have received from the distribution men.

Reporting for the Subcommittee on Pipe Coatings and Corrosion, A. V. Smith, The United Gas Improvement Co., chairman, stated that the manual on "Soil Corrosion and Pipe Protection," prepared by Dr. Scott Ewing, was ready for publication. He pointed to the vast

amount of effort given to its preparation and the fact that it will serve as a textbook for operating engineers.

Distribution engineers have made an important contribution to the New York World's Fair in solving unusual problems in connection with the gas industry's participation, according to Hugh Cuthrell, president, Gas Exhibits, Inc., and vice-president, The Brooklyn Union Gas Co. The New York Fair will use approximately four times as much gas as was used at the Chicago Fair, Mr. Cuthrell estimated. He urged the gas industry to support the effort to give gas a prominent place in the Fair.

Valuable information on recent development in pipe corrosion and protective coatings reported at the recent Conference on Soil Corrosion held at the Bureau of Standards, was summarized in a paper by Dr. Scott Ewing, A. G. A. research associate. Dr. Ewing's paper was limited largely to practical applications rather than laboratory investigations.

Commercial Refrigeration Described

Installation and Service experiences with gas commercial refrigeration were described by Thomas J. Perry, The Brooklyn Union Gas Company. This company has thirteen installations, eleven of 500 lbs. capacity and two of 1,000 lbs. capacity. Maximum gas input is estimated at approximately 30 cu.ft. per hour on the smaller job and 58 cu.ft. per hour on the larger, with 540 B.t.u. gas. Installation costs on the 500 lb. jobs averaged \$108.00 each and on the 1,000 lb. jobs, \$137.00 each. Mr. Perry stated that it was too early to estimate service costs.

Mr. Perry concluded: "Ten years experience in the domestic refrigeration field provides us with a background that makes solution of commercial refrigeration problems comparatively simple. The experience gained in the domestic field



These smiling faces would seem to indicate that the Distribution Conference was a great success—and it was. Pictured here are—top row, left to right: T. J. Perry, Brooklyn; E. W. Cristell, Chicago; H. L. Gaidry, New Orleans (chairman, Distribution Committee); Charles P. Turner, Cleveland (vice-chairman, Distribution Committee); L. W. Tuttle, Oak Park, Ill.; Alexander Forward, New York, and Merrill N. Davis, Bradford. Bottom row, left to right: John C. Clark, Philadelphia; W. P. Hutchinson, Bridgeport; F. A. Hough, Los Angeles; A. D. MacLean, Pittsburgh; A. V. Smith, Philadelphia; G. R. Bratton, Nashville, and Dwight H. Woods, Nashville.



Top row, left to right: Joe Harper, New York; Ed. Johnson, Pittsburgh; Cliff Wyman, Chicago; W. S. Guiteau, New York, and L. J. Willien, Chicago. Bottom row, left to right: L. B. Denning, Jr., Dallas; E. L. Henderson, Houston; C. S. Nairne, New Orleans (inset); C. S. Haxel, Philadelphia; S. P. Cobb, New York, and D. P. Hartson, Pittsburgh

is useful in the commercial field and as both fields are similar in many respects, service problems are negligible. When we consider that each commercial job approximated six domestic jobs, with the number of possible commercial applications running into thousands, it is evident that here is a sizable gas load even more desirable than the domestic load."

Servicing Domestic Appliances

Perhaps the outstanding paper delivered at the conference was that on "Servicing Domestic Appliances" by E. W. Christell, The Peoples Gas Light & Coke Co., Chicago. In a comprehensive and interesting manner, Mr. Christell presented a detailed discussion of the problems confronted in rendering satisfactory service on modern gas ranges. While servicing of the old style ranges was very simple, the advent of fully automatic modern ranges of all types, which change every year, has brought new problems which necessitate continuous training of the appliance service organization.

Mr. Christell warned against the possi-

bility of service organizations growing stale, making appliance adjustments as a matter of course, and losing the vigor and the whole-hearted desire to make precise adjustments. He emphasized the opportunity for improving public relations and creating good will for gas.

The odorization of natural gas in the Southwest was the subject of a timely paper by E. L. Henderson, United Gas Corporation, Houston, Texas, which is published elsewhere in this issue of the MONTHLY.

Gas Engine Possibilities

The intriguing possibilities of the gas engine as a medium for load building were discussed by R. S. Wenner, The Ohio Fuel Gas Co., Toledo, in his paper "Gas Engines for Power Generation." The gas engine load, under existing conditions, is largely dependent upon a favorable gas engine rate, he declared. Also, he pointed out, conventional methods involve too high an initial investment. He then described the method used at Toledo to offset these disadvantages which has solved their problem. Highly interesting charts and tables were presented with Mr. Wenner's talk, giving details of specific applications of gas engines.

(Continued on page 196)

Some weighty distribution problems were discussed during these informal gatherings. Included in the pictures are—top row, left to right: Chairman Gaidry, New Orleans; D. P. Hartson, Pittsburgh; C. H. Waring, Kansas City; Watson E. Derwent, Rockford; H. C. Blackwell, Cincinnati; A. C. Moorhaus, Cincinnati. Bottom row: W. A. Dunkley, Memphis; G. L. Bristol, Greenwich; two unidentified delegates and Dr. W. A. Pearl, Chicago; G. J. Heckendorn, Denver, and T. F. Killbaffer, Wilmington



Huge Production of Helium at Amarillo Plant

MORE than 80 million cubic feet of helium, which would be worth 200 billion dollars, if sold at 1917 prices, has been produced by the Bureau of Mines, Department of the Interior, at its Amarillo, Texas, helium production plant, C. W. Seibel, supervising engineer, stated in a paper presented before the annual meeting of the American Chemical Society, at Dallas, Texas, April 21.

The suggestion that helium be produced for inflation of airships was made in 1917 when there were not two cubic feet of helium in America and small quantities of the element were being sold at prices equivalent to \$2,500 per cubic foot. Experimental helium plants erected and operated during the World War proved that production of helium in commercial quantities was a possibility. In contrast with the fabulous 1917 prices, helium is now being produced at the Amarillo plant at a price approximating one cent per cubic foot.

War Increased Production

The decision by the Government to produce helium on a large scale was reached during the War, and after its close a plant was constructed at Fort Worth, Texas, to extract helium from natural gas produced in the Petrolia, Texas, gas field.

In 1925, when the Petrolia gas field was approaching exhaustion, Congress placed the Government's helium-production activities in the Bureau of Mines, and in 1927 the Bureau commenced acquisition and development of the Cliffside gas field of Potter County, Texas, which was a virgin gas-producing area.

The Bureau's survey for helium-bearing natural gases had shown that the gas from this field contained about 1¾ per cent of helium, and its pressure of more than 700 pounds per square inch, with other desirable features, indicated an extensive and valuable reserve of gas.

Through negotiations conducted by the Bureau, gas rights in 50,000 acres covering the Cliffside field were brought into Government ownership. With a large reserve of gas assured, wells were drilled, pipe lines laid, and a plant designed by Bureau engineers was erected on a site about 7½ miles west of Amarillo. Construction of this plant was started in August, 1928, and in April, 1929, it began to produce helium.

The Fort Worth plant produced about 48 million cubic feet of helium at operating costs ranging from \$175 to \$34 per thousand cubic feet. The Amarillo plant has produced more than 80 million cubic feet at an average operating cost of less than \$12 per thousand cubic feet and a net operating cost (taking account of return from sale of residue natural gas) of less than \$9 per thousand cubic feet. The operating costs above mentioned do not in-

clude charges for depreciation, depletion or interest.

Under an Act approved September 1, 1937, the Bureau of Mines is authorized to sell helium to private parties and the Government is acquiring two helium plants erected by a commercial company, so the Government will own the world's three plants that are capable of producing helium. Under this Act sales of helium are to be at reasonable prices based upon the cost of acquiring, developing, maintaining, and operating the Government's properties and the payment of certain interest charges. Regulations governing sale of helium were approved by the President on January 14, 1938, and amended with the President's

approval on March 10, 1938. The payments to be made for helium purchased from the Government by private parties will vary with the demand, decreasing with an increase in output, but they are expected to fall within the range of \$8 to \$15 per thousand cubic feet.

The largest use of helium is for inflation of lighter-than-air craft, but it has a number of other uses. Perhaps the most important of these is as a constituent of artificial breathing atmospheres used in diving and caisson work and in medical treatment. Helium is now being sold by the Bureau for use in relief of asthma and other respiratory disorders. With helium available at reasonable cost, it is expected that such use will expand greatly, and that this element, which only a few years ago was looked upon as a chemical curiosity, will do much to relieve human suffering.

Gas Float in Motorcade Preview of New York World's Fair



STREAM-LINED and modern in every aspect, in keeping with the theme "Gas—the Modern Fuel," is the striking float of the gas industry to be a feature of the Motorcade taking place in New York City on April 30. This event will "preview" the New York 1939 World's Fair.

In a determination to adequately present the true picture of gas and of its importance in the 1939 Fair, it has been the objective to make certain that the float representing the industry, although not elaborate, is designed to arouse the interest and admiration of the hundreds of thousands who will view the Motorcade. The float will indicate colorfully what Gas Exhibits, Inc., is doing to make gas predominate at the forthcoming international exposition.

Gas Exhibits, Inc., is a non-profit, co-operative enterprise organized by gas companies and manufacturers of gas appliances

throughout the United States to conduct and manage the industry's participation in the New York Fair. Hugh H. Cuthrell is president of the group.

Spectators viewing the gas industry's float will see grouped at the head of the 35-foot mobile panorama four beautiful living models holding up a gigantic flaming torch upon which will rest a large globe surrounded by stars and planets. The girls will represent the vestal virgins of old mythology who kept the universe's fires perpetually going. The motif of the float will be symbolic of the more than a century of continuous and faithful service which the gas industry has rendered to the civilized world.

An arch-shaped sign identifying the float by the words "Gas Industries" will bridge the latter group with a large model of the "Court of Flame" occupying the rear of the float. This reproduction of the focal

point of the gas industry's exhibit group at the forthcoming exposition will tower more than 13 feet above the street. The "Court of Flame" model on the float will give the public an idea of the 90-foot pylons, the 1,000 foot cube of glass out of which will roar skyward a majestic gas torch, the ring-like roof open to the sky, all of which will be a part of the industry's exhibit at the Fair.

Encircling the entire float will be produced the effect of waves of flames in brilliant colors giving an atmosphere of action to the whole float presentation.

The entirely mechanized parade will feature approximately 300 floats and about as many other vehicles of varied description. The purpose of the Preview is to emphasize the value of the Fair to America, acquaint the public with the attractions that will be on view when it opens, and extend an invitation to the world to attend the exposition in 1939.

Research the Best Insurance

"I am more than ever convinced that expenditure on research is one of the best forms of insurance for the future expansion of industry. Research is, in truth, the very foundation of our path of progress."—SIR DAVID MILNE-WATSON, Governor, The Gas Light and Coke Company, March 17, 1938.

Sir David added that his company expends almost \$500,000 on research and investigation into manufacture and utilization.

Gas Exhibits at Women's Show



A. G. A. exhibit at the Women's Exposition

TWO gas exhibits, sponsored by the American Gas Association and the Consolidated Edison Co. of New York, were features of the Women's National Exposition of Arts and Industries which took place Mar. 28 to April 2 in New York City.

Three settings were used in the A. G. A. exhibit, one showing a kitchen set-up and the others showing laundry and basement set-ups, all featuring modern gas equip-

ment. In the kitchen set-up a 1928 range was eclipsed by a modern automatic 1938 range with a modern gas refrigerator emphasizing the modern theme. This exhibit was designed by Ray Martin, director of display of the Consolidated Edison Co., assisted by B. H. Mahony.

Consolidated Edison's exhibit consisted of a model kitchen, supervised by young women from the home service department.

More Than Million View British Gas Films

THE British gas industry, through the British Commercial Gas Association, has done a notable piece of work in the preparation and distribution of gas films for educational purposes. Not only has the Association produced a variety of films from different approaches but also it has issued various pamphlets and mailing pieces designed to show gas companies how to obtain the greatest benefit from them.

The reception of the films has been such that they are in great demand. Even the daily newspapers have welcomed the films and many are the favorable comments published concerning them.

No less than 17 different films, ranging in length from 5 to 30 minutes, are listed as being available. The films bear such titles as: "How to Cook," "Pots and Pans," "Getting into Hot Water," "A Famous Cook at Work," "The Nutrition Film," "Romance of a Lump of Coal," "How Gas Is Made," "Dinner Hour," "Housing Problems," "What the Chef Saw," "The Smoke Menace," etc. The famous "Mr. Therm" is featured in many of the films.

The director of the program is Thomas Baird, of the British Commercial Gas Association. In commenting on the program Mr. Baird says:

"A few of the films have gone to the public cinemas as interest films on an ordinary renting basis and through this channel many thousands of the general public have seen and will see these films. But we do not consider this to be the most valuable distribution. Outside the theatres, the B.C.G.A., in cooperation with local companies has organized this year some 1,500 showings of these films to selected audiences, totalling about 250,000.

"In the London area over 1,000 additional shows have been given to an audience of 150,000 in 1937-38. Large provincial companies are giving film displays almost daily, and smaller companies are giving displays for short periods of one-ten weeks to proportionately large audiences. Some of these displays are given in showrooms or in connection with cookery and health demonstrations.

"Many units are visiting local clubs and societies in their own premises and at their own meeting time. In the afternoons the Mother's Unions and the Women's Institutes study health and cookery and in the evening Workers' Educational Groups, Teachers' Associations, Rotary Clubs, Church Societies discuss Nutrition, Education, Housing and Health. In this way the industry has come right into the leisure hours and the study hours of a great section of the public, who are already discussing or will-

ing to discuss those problems of the Gas Industry which are also the problems of everyday citizenship.

"The estimated total audience for these activities, excluding the audiences in public cinemas, for the winter session of 1937-38 is over one million, but we realize that a figure even as large as this must mean little if the displays are not tied in to a context which will preserve the interest once it has been aroused."

"Spring Thaw" Water Heater Campaign

FROM April 1 to May 15 the Philadelphia Electric Company is conducting a "Spring Thaw" commercial water heater campaign to promote retail sales which has attracted unusual attention. The objective is the sale of 70 automatic gas water heaters to beauty shops, barber shops, restaurants, taprooms, drug stores, and commercial establishments in general.

Under the direction of Harry E. LeVan, director, retail sales suburban divisions, a plan book and attractive mailing pieces have been prepared as sales helps. The mailing pieces include testimonials, pictures of typical installations, and other features stressing economy of operation and satisfactory performance.

Small Business Upheld

THE advantage of having a multiplicity of comparatively small concerns manufacturing gas appliances and equipment, was stressed by Merrill N. Davis, president of the Association of Gas Appliance and Equipment Manufacturers in an address before the Mid-West Gas Association Convention.

"We have often heard it said that it is regrettable and unfortunate that in our industry we do not have a limited number of very large manufacturing interests, the inference being that with a comparatively large number of relatively small manufacturers in the several divisions of our industry, a situation unlike that which exists in the electrical and automotive industries, we are at a disadvantage," Mr. Davis stated.

Small Manufacturer a Specialist

"I do not subscribe to such a philosophy. While it is true the production of gas appliances and equipment is not all centralized, and in no one line of appliances is manufacturing concentrated, that condition in itself is not a weakness. On the contrary, it has several distinct advantages. I firmly believe that the gas industry should benefit because of the relatively large number of comparatively small manufacturers of gas appliances and equipment. Each manufacturer is a specialist, and being concerned with but one line of appliance or equipment, he is able to operate with greater independence than would be possible if his business were operated as a department or product division of even the largest

manufacturer of equipment that one could conceive.

"In our contemplation of the very large manufacturers of all kinds of appliances and equipment for some particular utility or branch of industry, we are apt to let our admiration of this concentration of invested capital, and of manufacturing and selling facilities mislead us into the belief that such institutions serve their markets better than small responsible manufacturers who are specialists in the true sense of the word in their own particular fields.

"In the aggregate, the capital investment of those engaged in the manufacture of gas appliances and equipment compares favorably with that of manufacturers both large and small who are serving similar or competitive industries. Our manufacturers are at least equally responsible and reliable and because of their concentrated attention to one particular phase of the industry, they excel in their own research and development work."

79% Reduction in Bills if No Taxes

WARNING the nation of the rising burden of taxes, B. C. Forbes, in his column in the *New York Journal-American*, April 10, says that if everybody throughout the land "realized how much is actually filched by tax levies, there would be a nationwide revolt."

Taking the Consolidated Edison as an example, he says that the company has to pay in taxes a sum which, were it ap-

plied against the bills of residential electric customers, would mean a reduction in these bills of 79%. Tax imposts have increased 70% in seven years and this one company alone pays to New York City each year enough taxes to maintain New York's Fire Department for almost 18 months, enough to support all parks, parkways and museums three times over, enough to run the Health Department (including hospitals), enough to meet nearly one-third of the yearly bill for unemployment relief.

The writer says that one trouble is that soaring taxes make it increasingly difficult to provide workers with jobs. He refers to the Twentieth Century Fund report showing that a wage earner in New York earning \$1,000 pays \$123 in taxes; a salaried worker earning \$2,000 pays \$238.

Radio Script Available

SEVERAL companies have distributed to their department heads copies of the radio script on "The Gas Industry" which was presented over a coast-to-coast network, February 5, by the U. S. Department of Commerce. Additional copies of this script, which was published in the March Monthly, are available without cost from Association headquarters.

1938 Munroe Award To Be Made in October

PRESENTATION of the Charles A. Munroe Award, one of the highest honors bestowed by the gas industry, will be made at the annual convention of the American Gas Association in Atlantic City, N. J., next October. The award consists of a substantial sum of money and a permanent certificate. It is made annually by the Association to the individual judged to have made the most outstanding contribution toward the advancement of the gas industry.

The accomplishment may be along any line. Since the first award in 1929, it has been given for developments in refrigeration, labor saving accounting, rate making, dealer cooperation, sales expansion, public relations, research and change-over from one to another kind of gas. It has been won by a distinguished group of individuals.

Addison B. Day, chairman of the board, Southern California Gas Company, is chairman of the 1938 committee which will judge the applications submitted. Other members of the committee are George H. Clifford, president, Stone & Webster Service Corporation, and E. M. Farnsworth, president, Boston Consolidated Gas Company.

Companies employing individuals who are deemed worthy of consideration for the award are urged to sponsor applications in their behalf. All applications for the 1938 award should be filed with the American Gas Association, 420 Lexington Ave., New York City, before August 1, 1938.

Historical Scene in Louisville



Courtesy Louisville Gas & Electric Co.

A street scene in Louisville, Kentucky, showing the new gas lights used in 1856

Personal and Otherwise

Elected A.G.A. Director



W. E. Derwent

WATSON E. DERWENT, vice-president of George D. Roper Corporation, Rockford, Ill., was elected a director of the American Gas Association at a meeting of the Executive Board March 23 at Association headquarters in New York. Mr. Derwent fills the vacancy created by the death of J. S. DeHart, Jr.

Mr. Derwent is a director and chairman of the Domestic Gas Range Division of the Association of Gas Appliance and Equipment Manufacturers. He is a member of the A. G. A. Laboratory Approval Requirements Committee on Test Gases and Test Pressures.

During the Association year 1935-1936 Mr. Derwent served as chairman of the Manufacturers' Section of the American Gas Association. He has been one of the most active supporters of both the A. G. A. and the manufacturers' association.

Elect Davis M. DeBard Vice-President

DAVIS M. DEBARD has been made vice-president of the Stone & Webster Service Corp., New York, N. Y. For the last 12 years he has been in charge of sales for all Stone & Webster operating companies in the United States and abroad.

In the last three years Mr. DeBard was engaged in special studies on utility service for low-income groups. He has been especially interested in gas water heating, and was one of the first to advocate rental-ownership plans for gas appliances. He is an active member of the American Gas Association and will be one of the principal speakers at the Natural Gas Department convention in New Orleans, May 9-12.

Consolidated Changes

THE following organization changes were recently announced by W. Cullen Morris, vice-president in charge of System gas engineering operations, Consolidated Edison Company of New York, Inc.: A. E. Turner, superintendent, was made manager of the Customer Service Department; C. E. Muehlberg, assistant general superintendent, succeeds Mr. Turner as general superintendent. W. C. Oeckler,

assistant general superintendent, continues in that position. Alfred W. Fuller, former assistant superintendent, was made superintendent of the gas Meter Repair Bureau. His assistant superintendents are Frank J. Kelly and David R. Jones.

C. W. Bennett to Retire from Active Service



Charles W. Bennett

capacity.

For forty-five years Mr. Bennett has been actively identified with the gas industry, entering the service in 1893 with the Consolidated Gas Company of New Jersey. Through succeeding years he was engaged upon construction work with the Frontenac Gas Company of Quebec and later as general manager of the Binghams Gas Works from 1908 to 1916.

Beginning in 1916 Mr. Bennett in his managerial capacity guided the destinies of the Detroit City Gas Company for many years throughout the period of its most rapid expansion coincident with the phenomenal growth of the City. He saw the number of meters on the company's lines increase from 155,556 to 422,022; the number of miles of mains increase from 841 to 2,715; the use of gas increase 357%. During the same period the number of employees increased from 1,354 to 2,540 and the annual payroll from \$1,032,000 to \$5,159,000.

Mr. Bennett has been active in civic and industrial affairs, having been National Councillor of the Detroit Board of Commerce for many years and a member of the National Legislative Committee of the Detroit Board of Commerce. He is a director of the American Gas Association. He is a past director of the National Commercial Gas Association and the Detroit Y. M. C. A., and was also a member of the Utilities Information Bureau of Michigan for a number of years. He is a member of the Michigan Gas Association, of the Detroit Athletic Club, the Detroit Club, the Detroit Golf Club, and of Moslem Temple. He is a Thirty-second Degree Mason.

Heads A.G.A. Laboratories Managing Committee

NT. SELLMAN, assistant vice-president, Consolidated Edison Company of New York, has been appointed chairman of the Managing Committee of the American Gas Association Testing Laboratories, to succeed the late John S. DeHart, Jr., of Newark, N. J., president of Isbell-Porter Company. The appointment was made by N. C. McGowen, president of the American Gas Association. Mr. Sellman has been a member of the Managing Committee since the formation of the Laboratories in 1925.



N. T. Sellman

A graduate of Stevens Institute of Technology, in 1913, Mr. Sellman entered the gas business that year with the Consolidated Gas Company of New York as test engineer of gas appliances. He holds the distinction of being the first winner of the Charles A. Munroe Award, presented annually by the American Gas Association to the individual judged to have contributed most to the development of the gas industry during the year. This award was made in 1929 for his pioneering work in connection with the development of the gas refrigerator.

The "Voice of Time"



Westbrook Van Voorhis, the "Voice of Time," receives the congratulations of George S. Jones, Jr., vice-president of Servel, Inc., at the premier presentation of the "March of Time" radio program, April 7. This is the second year the manufacturer of gas refrigerators has sponsored the program.

Stanley Jenks Named Editor of "Gas" Magazine



Stanley Jenks

STANLEY JENKS, for many years prominent in both the gas industry and the journalistic profession, has been appointed as editor of *Gas*, effective last March 15. Mr. Jenks, will maintain his office in New York City.

Mr. Jenks first entered the gas industry in 1920 as cadet engineer with the Northern Indiana Gas and Electric Co., Hammond, Ind., and in that capacity organized the company's advertising and publicity department, being appointed manager. Shortly after this company became the Northern Indiana Public Service Co., he was appointed sales manager and served in that capacity until 1935 when he became the Eastern manager for Bastian-Morley Co.

Active in the American Gas Association, Mr. Jenks has been prominently identified

with many Commercial Section activities. In 1931 he served as chairman of the Association's Water Heater Committee and in 1933 was chairman of the Mid-West Gas Sales Council. He has appeared on many gas convention programs throughout the country.

Public Service Advances Eleven Employees

VICE-PRESIDENT JOHN A. CLARK, in charge of gas operations of the Public Service Electric and Gas Company, recently announced the following promotions, effective April 1.

Otto Reiner, from division engineer, Passaic Division, to assistant general superintendent of distribution.

Robert H. Philipps, Jr., from engineer of manufacture, Essex Division, to assistant general superintendent of manufacture.

Ernest F. Weeks, from superintendent, Paterson Gas Works, to engineer of manufacture, Passaic Division.

L. Martin Harris, from superintendent of distribution, Paterson District, to engineer of distribution, Passaic Division.

J. Arthur Scheller, from superintendent

of Harrison Gas Works, to Essex Division engineer of manufacture.

Jack V. Richards, from superintendent of Trenton Gas Works, to superintendent of Harrison Gas Works.

Willard E. Lebo, from assistant to engineer of manufacture, Harrison Gas Works, to assistant superintendent, Harrison Gas Works.

John S. Hurd, from assistant superintendent of Paterson Gas Works, to superintendent, Trenton Gas Works.

Charles A. Dewhurst, from assistant to engineer, Paterson Gas Works, to superintendent of manufacture, Paterson Gas Works.

Roger H. Damon, from superintendent of distribution, Pompton District to superintendent of distribution, Paterson District.

Irvin S. Webster, from assistant to engineer, Ridgewood District, to superintendent of distribution, Pompton District.

C. E. Bennett Appointed to Laboratory Group

CHARLES E. BENNETT, president of the Manufacturers Light and Heat Company, Pittsburgh, Pa., has been appointed a member of the Managing Committee of the A. G. A. Testing Laboratories. Mr. Bennett is a member of the Advisory Council of the Association and has long been active in its affairs. He served as chairman of the Commercial Section in 1935-1936.

Prior to going to Pittsburgh, Mr. Bennett was president and general manager of the Binghamton Gas Works, Binghamton, N. Y.

Gas Engineers Fete Larson

BELOW is shown a group from Downtown Gas Engineers Lunch Club, New York City, wishing Erick Larson luck as he leaves to take up new duties as assistant to Alfred Hurlburt, vice-president, Republic Natural Gas Co., Corpus

Christi, Texas. Mr. Larson has been in the engineering department of the Long Island Lighting Company for the past fourteen years. He is a past chairman of the Distribution Committee of the American Gas Association's Technical Section.



King Photo

Seated, left to right: Floyd W. Parsons, Gas Age; Mr. Larson; W. P. Hutchinson, Sprague Meter Co. Standing, left to right: J. R. Wobley, Cities Service Co.; G. H. Magee, Long Island Lighting Co.; Stanley Jenks, Gas; T. B. Williams, Utility Management Corp.; A. I. Phillips, American Gas Journal; A. E. Lockwood, Penn-Western Service Corp.; A. Gordon King, American Gas Association; E. J. Murphy, The Brooklyn Union Gas Co.

Helium Research Wins Dr. Cottrell Award

DR. FREDERICK G. COTTRELL, whose research on an inexpensive process for recovering helium from oil well gases made possible its commercial use, has been announced as the winner of the 1938 medal of the American Institute of Chemists. Dr. Cottrell is a former head of the U. S. Bureau of Mines.

Presentation of the award, made annually for outstanding service to the science of chemistry in America, will be made at the institute's annual dinner at Atlantic City, N. J., on May 14.

Thompson Joins Peerless

HARRY E. THOMPSON, formerly in charge of the gas heating department of the Delco-Frigidaire Div. of General Motors, has resigned to take charge of the design and testing of gas heating equipment for the Peerless Manufacturing Corporation of Louisville, Ky. Mr. Thompson was at one time connected with the American Gas Association Testing Laboratory in Cleveland.

Affiliated Association Activities

Pacific Coast Gas Association Holds Spring Meetings

THE Pacific Coast Gas Association held its Annual Spring Conference in Los Angeles, March 24 and 25. This Conference was sponsored jointly by the Sales and Advertising Section and the Manufacturers Section of the Association, its purpose being to discuss informatively the present status of sales and merchandising in the Pacific Coast states.

Discussions included able presentations of the various national and regional campaigns and contests to aid sales, among which is the A. G. A. national advertising, the regional advertising of the Pacific Coast Gas Association, the Prize Parade Water Heater Campaign, the 1938 refrigerator sales promotion, the Certified Performance Range, and the Architects' and Builders' Contests being sponsored by the Home Appliance Planning Bureau.

The program was planned and supervised by Norbert O. Fratt of Seattle, chairman of the Sales and Advertising Section, with the assistance of Harvey W. Edmond of Santa Cruz, chairman of the Domestic Sales Committee, and E. H. Adler of San Diego, chairman of the Industrial Sales Committee. Messrs. Edmond and Adler conducted simultaneous meetings of their two committees, Mr. Adler's committee devoting its time to a discussion of commercial cooking particularly with reference to counter cooking devices and to a discussion of draft and other controls for large installations.

Homer Laughlin, chairman of the Advertising Committee, supplied two luncheon programs, one of which featured a sneak pre-view of the new Hal Roach short, "Penny's Party." The other luncheon featured some moving pictures of the heroic measures necessary to maintain gas service in Southern California during the heavy rains and flood conditions which prevailed early in March.

The sales conference was held in conjunction with the Western Metals Congress. One afternoon was left free to attend the mammoth exhibition of metal working equipment which was a feature of the Congress. In this exhibition the gas industry was represented by a comprehensive display sponsored jointly by the American Gas Association, the Pacific Coast Gas Association, and the Natural Gas Bureau of Los Angeles.

Technical Conference

The Technical Conference took place on April 7 and 8, also in Los Angeles. The chairman of the Technical Section, Arthur B. Allene of San Francisco, arranged a splendid program covering for the most part the technical problems of the natural gas men in California. Simultaneous meet-

ings were held of the Distribution, Transmission and Utilization Committees under the leadership of their respective chairmen, H. G. Laub of Los Angeles, F. E. Wilson of Hollister, and R. I. Snyder of Los Angeles. The Production Committee held a brief meeting under the leadership of its chairman, J. E. Kelley of San Francisco, to discuss butane plants.

Most of the papers were distributed in advance of the meeting either through publication in the Association's official magazine, *Gas*, or in mimeograph form.

This meeting also devoted some time to a review of the Southern California flood damage.

The next meeting of the Pacific Coast Gas Association will be its Northwest Conference to be held in Portland, Oregon, June 16 and 17.

New Jersey Gas Association



B. A. Seiple

president of the Association, presided at the sessions.

Bernard A. Seiple, Jersey Central Power & Light Co., Asbury Park, was elected president for the coming year. Other officers elected were: G. B. Webber, Public Service Electric & Gas Co., first vice-president, and Frank H. Darlington, Peoples Gas Co., Glassboro, second vice-president. H. A. Sutton, Public Service Electric & Gas Co., was re-elected secretary-treasurer.

The keynote address, prepared by Walter C. Beckjord, vice-president and general manager, Columbia Gas & Electric Corp., was delivered by Irving K. Peck. Entitled "Our Sales Program from an Executive Viewpoint," Mr. Beckjord's paper was a masterly analysis of the present sales picture. He concluded that a definite, forward-looking, intelligent sales effort cannot help but achieve results. "We have all the essentials," he stated in his paper, "but prompt action is imperative."

Greetings from the American Gas As-

sociation and an introduction to Mr. Beckjord's paper were delivered by Alexander Forward, managing director. Important parts of the current A. G. A. program were covered by various representatives. Hall M. Henry spoke on the Certified Performance Range; Eric Ruckelshaus on the 1938 Prize Parade Water Heater Contest, and J. F. Quinlan on the Home Appliance Planning Bureau Activities.

A technical session was held in the afternoon with John J. Crilly, chairman of the N. J. G. A. Technical Committee, presiding. A feature of this meeting was the showing of the film "Story of Gas," produced for the American Gas Association.

Indiana Gas Association

STARTING with a directors' meeting, Sunday, May 15, and continuing through Monday and Tuesday, May 16 and 17, the annual convention of the Indiana Gas Association offers an informative program for visiting delegates. Convention headquarters will be in the Hotel Gary, Gary, Ind.

The business program gets under way Monday morning with the report of the secretary-treasurer, P. A. McLeod. Indiana's position in the gas business will be discussed by H. Carl Wolf, Muncie, president of the association. An address by E. M. Tharp, Columbus, entitled "The Way Out," will close the morning session.

Luncheon Meetings

The commercial, accounting and technical sections will hold separate luncheons Monday at 12:30, followed by parallel meetings, starting at 2:00 P.M. Various features of the A. G. A. program, including the refrigeration and water heater campaigns, national advertising, and the certified performance gas range, will be discussed in a symposium of the commercial section led by C. V. Sorenson, Indianapolis.

Herman Horstman will conduct the technical session which will include reports on unaccounted-for gas, appliance servicing, and the showing of slides on proper range adjustment. A keynote speaker and other features are also being arranged.

The accounting meeting will feature a symposium on the new Uniform Classification of Accounts under the chairmanship of D. P. Pardee, Indianapolis. The A. G. A. Accounting Report will be given by Dean H. Mitchell, chairman of the Accounting Section. Bernard T. Franck, Grand Rapids, will present a paper on Home Service following the parallel meetings.

The Tuesday program opens with a discussion of Employee Education by Prof. R. E. Greenlea, of Purdue University, and in-

cludes addresses by Carl Sorby, Rockford, on the Certified Performance Range, and by F. C. Armbruster, Chicago, on Gas Load Building with Water Heating. This session also includes a gas range skit and a paper on the appliance dealer problem.

Gas engineering activities at Purdue University will be described by Dr. John L. Bray at the final session, Tuesday afternoon. Other speakers will be Irving J. Lee, Northwestern University, on "Persuasive Speech" and Dr. Daniel Starch, New York, on "Gas—Is the Horse Dead or the Rider?" President Wolf will make the closing remarks.

An evening session, including a banquet will be held beginning at 7:00 P.M. Tuesday.

Wisconsin Utilities Association

FRANK WILKINSON, La Crosse, was elected chairman of the technical division of the gas section of the Wisconsin Utilities Association at the annual convention. Mr. Wilkinson is gas superintendent for the Northern States Power Co. He succeeds E. C. Brenner of the Milwaukee Gas Light Co.

Charles G. Grau, manager of the Oneida Gas Co., Rhinelander, was elected chairman of the commercial division of the gas section.

Other officers elected were: G. A. Anderson, Sheboygan, gas superintendent of Wisconsin Public Service Corp., vice-chairman of the technical division; and A. A. Zertler, Marshfield, manager of the Peoples Gas Co., vice-chairman of the commercial division.

Canadian Gas Association

ADVANCE plans for the annual convention of the Canadian Gas Association, to be held June 9 and 10 in Toronto, Canada, indicate a practical and significant meeting. Three general sessions are being planned, two on June 9 and the remaining one on June 10. J. D. Von Maur, well-known distribution executive, is chairman of the program committee.

Papers already announced include: "Combustion Characteristics of Various Gases When Used in Customers' Appliances" by John Keillor, Vancouver; "Water Heating with Gas" by G. S. Dawson, Vancouver; "House Heating with Gas" by H. B. Johns, Chicago; "Kitchen Gas Appliances" by H. E. G. Watson, Toronto; "Water Heating with Gas" by Frank D. Howell, Brantford, Ontario; "Distribution" by Erick Larson, Corpus Christi, Texas; "Devices for Detecting Gas Leakage" by P. W. Geldard, Toronto; "The Value of Gas in Industry" by R. F. Mann, Kenmore, N. Y., and an address by Merrill N. Davis, president, A. G. A. E. M.

All delegates will be guests of the Association at a luncheon to be held on the first day and the ladies will have a special program. The annual banquet is expected to be an outstanding affair.

Requests for hotel accommodations should

New Officers of Mid-West Group



S. D. Whiteman
President



F. J. Gunther
1st Vice-Pres.



C. B. Dushane, Jr.
2d Vice-Pres.



R. B. Searing
Sec.-Treas.

These men were elected as officers of the Mid-West Gas Association at the annual convention in St. Paul, Minn., April 11-13

be sent early. Convention headquarters will be in the Royal York Hotel, Toronto. For full information, apply to the secretary, G. W. Allen, 7 Astley Ave., Toronto 5, Ont.

Utility Employees Honored for Life Saving

SAFETY training received from his company was credited by Claud R. Arnett, employee of the Monongahela West Penn Public Service Co., Fairmont, W. Va., with making it possible for him to rescue a fellow employee. Mr. Arnett was singularly honored at a special ceremony April 5 for his successful resuscitation last November

12 of Guy Toothman, also employed by the company. He received the McCarter Medal and Certificate for his heroic act.

Goebel W. Harr, manager of the gas department, presided at the meeting and presented the medal to Mr. Arnett. It was the first McCarter Medal ever to be won by a Monongahela employee. Safety Director P. M. Bower, of the company, spoke briefly concerning the significance of the award and the importance of safety training. Other speakers included Vice-President C. H. Leatham, Personnel Director R. S. Soule and Fairmont Division Manager P. H. Sommer.

Preceding the presentation ceremony a luncheon was served to 30 of Mr. Arnett's fellow employees and executives of the company.



Claud R. Arnett, proudly displays the McCarter Certificate awarded to him for life saving

Three employees of the Consolidated Edison Co. of New York received McCarter Medals and Certificates during March for their conspicuous acts of life saving by the Schafer prone pressure method of resuscitation. They were John G. Richie, John G. Bartholomey, and Henry Schoenfeld. A fourth employee, John H. Muller, Jr., was presented with a McCarter Certificate of Assistance. The presentations were made by A. E. Turner, general superintendent.

The awards are made possible by the generosity of Thomas N. McCarter, president, Public Service Electric & Gas Company.

Taxes Up 42% in Four Years

TAXES paid by the Lone Star Gas System, Texas, have jumped 42 per cent during the last four years. In 1936 Lone Star paid out more than \$2,000,000 in taxes. To meet this one item of expense required the revenue of 102 days' operation. It took 71 cents of each monthly domestic and commercial gas service bill rendered in 1936 to pay this tax bill.

Columbia Course Going Strong

REPEATED announcements to the contrary, impression still prevails that the Columbia University Extension Course in American Gas Practice for Home Study has been discontinued, according to Professor J. J. Morgan who is in charge of this course.

Nothing could be further from the fact. Since January 1, 1938, twenty-three new enrollments have been made in the course. There are now about 140 students enrolled, and 341 lessons were received from these men during the first three months of 1938. This exceeds the number for any three months since the year 1933.

New enrollments are received at any time, and detailed information on the course will be gladly furnished by Profes-

sor J. J. Morgan, Department of Chemical Engineering, Columbia University, or the American Gas Association, 420 Lexington Avenue, New York, N. Y.

Bow Island Gas Storage

CANADIAN Western Natural Gas, Light, Heat & Power Co., Calgary, Alberta, is continuing repressuring operations in the Bow Island field, the daily storage of waste gas from Turner Valley amounting to approximately 5,000,000 feet.

Operations were commenced in August, 1930, and it is estimated that at the end of 1937 some 10,500,000,000 feet had been stored. The field constitutes a reserve for the Canadian Western system, which at present draws practically its entire requirements from Turner Valley.

John H. Pardee Dies

JOHN HERBERT PARDEE, chairman of the board of the Utility Management Corporation, New York City, which supervises the operation of properties of the Associated Gas and Electric System, died April 20. He was seventy-one years old.

Mr. Pardee was well known throughout the utilities industry with which he had been associated more than forty years. He served as a director of nearly a score of utility holding and operating companies in the United States, Canada and the Philippine Islands, many of which were a part of the Associated Gas and Electric System. He joined the utility management Corporation in 1907 through its predecessor, J. G. White & Co., and was formerly president of the firm.

Convention Calendar

MAY

- 9-12 A. G. A. Natural Gas Department
Roosevelt Hotel, New Orleans, La.
- 9-13 National Fire Protection Association
Atlantic City, N. J.
- 13-15 National Petroleum Association
Cleveland, Ohio
- 14-21 International Petroleum Exposition
Tulsa, Okla.
- 15-18 American Society of Mechanical Engineers, National Oil and Gas Power Meeting
Dallas, Texas
- 16-17 Indiana Gas Association
Hotel Gary, Gary, Ind.
- 18-19 New York-New Jersey Regional Gas Sales Council
Hotel Astor, New York, N. Y.
- 23-24 A. G. A. Hotel, Restaurant and Commercial Sales Conference
Commodore Hotel, New York, N. Y.
- 23-25 American Petroleum Institute, Mid-Year Meeting
Wichita, Kansas
- 23-25 A. G. A. Production and Chemical Conference
Hotel Pennsylvania, New York, N. Y.
- 24-25 Midwest Industrial Gas Sales Council
Indianapolis, Ind.
- 25-27 Association of Gas Appliance and Equipment Manufacturers
The Greenbrier, White Sulphur Springs, W. Va.
- 27-28 7th Annual Petroleum and Natural Gas Conference
State College, Pa.
- May 31-June 3 The Institution of Gas Engineers
London, England

JUNE

- 7-9 Edison Electric Institute
Atlantic City, N. J.
- 7-10 Home Service Conference and Training Course
Hotel Muehlebach, Kansas City, Mo.
- 9-10 Canadian Gas Association
Royal York Hotel, Toronto, Ont.
- 13-14 Public Utilities Advertising Association
Detroit, Mich.

- 16-17 Pacific Coast Gas Association, Northwest Conference
Portland, Oregon
- 23-24 New England Gas Association, Sales Conference
Viking Hotel, Newport, R. I.
- June 27-July 1 American Society for Testing Materials
Chalfonte-Haddon Hall, Atlantic City, N. J.
- June 28-July 1 American Home Economics Association
William Penn Hotel, Pittsburgh, Pa.

JULY

- 5-7 Michigan Gas Association
Grand Hotel, Mackinac Is., Mich.
- 27-28 West Virginia Oil and Natural Gas Association
Charleston, W. Va.

SEPTEMBER

- 14-16 Pacific Coast Gas Association
Santa Barbara Biltmore Hotel, Santa Barbara, Calif.
- 19-22 American Transit Association
Auditorium, Atlantic City, N. J.

OCTOBER

- Wk. 10 American Gas Association
Atlantic City, N. J.
- 10-14 National Safety Council
Stevens Hotel, Chicago, Ill.
- 24-28 National Hotel Exposition*
Grand Central Palace, New York, N. Y.
- National Metal Congress and Exposition*
Detroit, Mich.

DECEMBER

- 5-10 National Exposition of Power and Mechanical Engineering*
Grand Central Palace, New York, N. Y.

* Includes exhibit sponsored by A. G. A. Industrial Gas Section.

Gas Holder Expert Is Dead



H. W. Alrich

HERBERT W. ALRICH, engineer, expert on inventory and regulatory matters for Consolidated Edison Company of New York, and a recognized authority on gas holders, died suddenly March 25. He was sixty-six years old. Born in Wilmington, Delaware,

Mr. Alrich started work at eleven years of age folding newspapers for the *Morning News* at \$1.00 a week. At fourteen Mr. Alrich entered the employ of the Pullman Company.

His first connection with the gas industry came in 1901 when he helped in the enlargement of the Ravenswood gas plant in Long Island City. He then worked for other companies in the Consolidated Edison group and in 1913 he became assistant engineer of construction for the company.

During his connection with Consolidated Edison he was actively associated with the construction, extension and maintenance of every gas plant and gas holder of the company and its affiliated companies. Much of his work was concerned with the design and construction of large gas holders and their foundations. He contributed many technical papers to various societies on the subject of gas holders, and in 1910 he received the Beal Medal of the American Gas Institute, the highest annual technical award of the gas industry. He was considered an international authority on the subject of gas holder construction and maintenance.

He was a member of the American Gas Association, American Society of Mechanical Engineers, the Society of Gas Engineers, and other organizations.

Accounting Section

D. H. Mitchell, Chairman

H. W. Hartman, Secretary

H. A. Ehrmann, Vice-Chairman

The Public Utility and Its Customers

By H. R. JESPER

The Brooklyn Union Gas Co.

WHY some customers of the utility assume a different attitude in their relations with the utility from that in their day to day dealings with the butcher and the grocer, is a problem that is always pressing for solution. The answer may be found in the public reaction to the size of the utility or in the character of its business or a combination of the two. If the customer is dissatisfied with utility service he finds it impossible to avail himself of satisfactory substitute service. The fact that a utility generally has exclusive rights in its territory to serve the public, takes the utility out of the class of the ordinary tradesman and makes it incumbent upon the utility operator to render service of a character against which no reasonable complaint may be lodged.

Aside from the fact that a utility has the exclusive right to serve a given area, its very size sometimes creates a misunderstanding. Generally the utility is one of the largest enterprises in its community. People whose utility service does not meet the standard to which they believe themselves entitled are prone to conclude that nothing can be done about it because such a large corporation can exercise some mysterious power and so punish those who disagree with it. Utility men know that there is no foundation for this attitude and should take steps to put the public mind at rest on this question. If the customer has confidence in the butcher it is because he is acquainted with the butcher and knows that he is dealing directly with the man whose business success is at stake.

The Perennial Problem

There is nothing new in public relations, it is a problem that has always been with the utility and will continue to be with it.

It has been said that eternal vigilance is the price of liberty. Eternal vigilance is likewise the price of good public relations. After a major catastrophe insurance rates usually increase. This is because insurance companies feel that they were too complacent and too willing to accept a situation the unsoundness of which was made apparent by the catastrophe. It is far better for the company to be eternally vigilant to the end that no untoward happening can at one stroke destroy more good will than can be acquired through years of struggle.

Whatever virtues a utility may possess will be demonstrated by the quality of service that it gives and while it is not necessary for a utility to advertise its virtues, there is such a thing as being so un-

reasonably modest as to completely hide one's light under a bushel. Without being offensive about it, it is appropriate that the utility keep its patrons informed as to the quality of its service. Like the old village church which has stood for 200 years on the village green, even though the worshipers gather each Sunday in goodly numbers, they still hear on each Sunday morning the melodious chimes of the church bell.

Good customer relations cost nothing over and above the cost of rendering that type of service to which the customer is entitled. It is quality service and nothing else that builds customer confidence.

Big Business Attitude

Where the public shows a hostile attitude towards "big business" it is generally fostered by a feeling that big business, because of its size is inherently dishonest. This of course is not the case. Frequently a large corporation will be found in some unimportant aspect of its business not to have been able to see eye to eye with some enthusiastic investigator and from this, big business finds itself condemned. Business integrity and common honesty are not matters of size.

So far as the great bulk of utility customers are concerned, it is clear that their interest centers almost entirely on the price paid for service as well as its quality. Few people understand rates or rate making and have little concern with the technicalities of this subject or how a rate is applied. The amount of the monthly bill carries more conviction than the most elaborate explanations however politely made and we can be sure that high-sounding platitudes will never substitute for reliable service. The customer has no interest at all in the difficulties under which a utility operates. To answer a customer's complaint by referring to some requirement imposed upon the company by public authority is of no interest to the customer and it will never add to his confidence in the utility to point out that to a large extent its dealings with the customer are carried out in obedience to laws.

In dealing with customers we should be mindful of the old truism that first impressions are lasting and usually what we think of others is a direct reflex of what they think of us. Good customer relations will never be attained by appropriating a stated sum of money chargeable to a given account

nor will good public relations be retained by spasmodic efforts to be pleasant rather than serviceable. If, in the foregoing, I have properly sensed the state of the public mind, steps should be taken to view this problem from the customer's angle.

The proper training of employees is an essential step in the direction of good customer relations. Before an employee can lend himself to training he must show the proper attitude towards his calling. This means that the employee must be satisfied with his environment, his working conditions and his compensation. The employee should be taught that he is an essential part of the enterprise. He should be made to understand that the success or failure of the business affects him just as much as the success or failure of the butcher shop affects the man who owns it.

There are many phases of our contact with the public that might be used to illustrate the point in the mind of the writer. For a very large proportion of the customers only one visit is made to the headquarters of the utility and that upon the occasion of opening the account. The treatment given a customer on this occasion will very largely influence the attitude of the customer towards the utility. On this occasion the customer is only too frequently in our opinion asked to pay a deposit. Sometimes it is difficult for a customer to understand the necessity of paying a deposit and frequently he feels that a request for a deposit is an implied challenge to his honesty and credit standing.

No Deposit Advocated

We believe that the policy of accepting deposits should be based on the proposition that no deposit should be taken except where the necessity for it is proven rather than the familiar rule that deposits must always be taken except that the customer prove conclusively his worthiness for credit. Whether a deposit is taken or not it should be made clear to the customer that if a deposit is taken and through the prompt payment of bills he establishes his right to be served without a deposit, that his deposit will be refunded and in the meantime interest will be paid; on the other hand, where a customer is accepted without making a deposit he should be informed that if remittances are not made in accordance with the rules of the company the extension of credit will be withdrawn and deposit required.

The company should adopt a sound collection policy and adhere to it without deviation. Consciously or unconsciously

(Continued on page 200)

Commercial Section

Hugh Cuthrell, Chairman

J. W. West, Jr., Secretary

F. X. Mettenet, Vice-Chairman

Managing Committee Reviews Association's Sales Promotion Program



Hugh Cuthrell

AN important meeting of the Managing Committee of the Commercial Section was held at A. G. A. Headquarters in New York, April 1. Under the chairmanship of Hugh Cuthrell, vice-president, The Brooklyn Union Gas Company, the committee reviewed its activities and discussed various features of the gas industry's coordinated sales program.

Reporting for the Appliance Financing and Dealer Relations Committee, H. E. Dexter, chairman, reviewed the discussions of the committee with the National Association of Master Plumbers. He stated that the 1931 agreement had been reaffirmed since it was found out that the proposed plan of cooperation violated some of the Federal Statutes.

Mr. Dexter recommended that the educational effort of the A. G. A. to persuade gas companies to cooperate and work with their dealers be continued. The principles of the 1931 agreement are not only applicable, he indicated, but are a fine basis for cooperation. He further suggested that if the plumbers' national association would bring to the attention of the committee specific instances of difficulty, it would be willing to take steps to work out the problem with the gas company involved.

The work of the Appliance Servicing Committee, as reported by T. J. Perry, chairman, was approved. Reports on this activity will be published as soon as they are completed.

New Range Committee

A new Domestic Range Committee, with six utility representatives, was appointed to follow the former committee and the Subcommittee on Promotion of the Certified Performance Range. The new committee, headed by F. M. Houston, Rochester, includes as members six representatives of the A. G. A. E. M. and will work with R. S. Agee, A. G. A. E. M. staff sales promotion manager. The immediate objective is promotion of the Certified Performance Range. Utility men appointed to serve on the committee, in addition to Chairman Houston, are: A. F. Rice, Southern Cali-

fornia Gas Co.; C. C. Young, Gas Service Co.; J. L. Johnson, The Peoples Gas Light and Coke Co.; B. T. Franck, Grand Rapids Gas Light Co.; and R. A. Malony, The Bridgeport Gas Light Co.

A vote of thanks was extended to Hall M. Henry for his fine work as chairman of the Subcommittee on Promotion of the Certified Performance Range.

In the absence of N. T. Sellman, chairman of the Special Committee for Improving Domestic Appliances, Mr. Cuthrell reported that this committee turned its attention to the water heater. The first part of the water heater program is to establish tests which will reveal the over-all or service characteristics of water heaters and thus form a better basis for evaluating changes and improvements.

Refrigeration Contest

The activities of the Refrigeration Committee, H. R. Sterrett, chairman, have been confined to the nationwide Refrigeration Contest. The 1938 contest has 401 companies with more than ten and one-quarter million meters enrolled, a greater participation than in previous years, and is proving extremely effective.

The Water Heating Committee, R. E. Williams, chairman, has proceeded with the Water Heater Prize Parade sales contest. A total of 12,000,000 meters are enrolled in the contest. This exceeds last year's contest by more than 650,000 meters. It is estimated that over 3,500 salesmen and 700 gas companies and divisional offices are entered.

L. W. Johnson, chairman of the Non-Residential Heating Committee, reported that this committee's activities include the study of the commercial possibilities of non-residential heating as well as the engineering of such installations. Concerning the latter, he indicated that ample data were on hand to be used to advise gas companies on the technical procedures. The plans of the committee were approved by the Managing Committee.

The Home Service Committee is making rapid progress completing its assignments, according to Mildred Clark, chairman. All of the items originally included are approaching completion, with the exception of the "increased use—load building" plans.

It was suggested that the House Heating and Air Conditioning Committee, F. H. Trembly, Jr., chairman, consider the use in advertising of the slogan "Join the Swing to Gas Heat" and a suitable figure which could be prepared for general use on a

syndicated basis. Activities of the committee were reviewed by C. G. Segeler in the absence of the chairman.

Details of future Window and Store Display Bulletins are being worked out by a committee headed by Allan Halladay. The new bulletins are expected to include some novel features in the way of thumbnail sketches in black and white which will permit a large number of ideas to be presented.

Other subjects discussed by the Managing Committee included: architects' and builders' contests, sales training, salesmen's compensation plans, New York World's Fair, and exchange of Laboratory information.

Present at the meeting, in addition to Mr. Cuthrell, were: R. S. Agee, Mildred Clark, R. F. Cleary, H. E. Dexter, Hall M. Henry, F. M. Houston, W. L. Hutcheson, L. W. Johnson, R. A. Koehler, H. H. Koebel, R. A. Malony, Jessie McQueen, T. J. Perry, F. M. Rosenkrans, F. E. Sellman, C. V. Sorenson, H. E. G. Watson, R. E. Williams, and C. George Segeler.

Home Service Meeting and Training Course

THE second annual Home Service Conference and Training Course will be held in Kansas City, Mo., June 7-10. All meetings will be held at the Hotel Muehlebach. The course is sponsored by the Home Service Committee of the American Gas Association, whose chairman is Mildred Clark of the Oklahoma Natural Gas Company.

In the first course, held last summer at the A. G. A. Testing Laboratories in Cleveland, an attendance of 175 was made up of home service directors as well as teachers and students from colleges of home economics. This year invitations are being extended to all colleges so that students interested in entering the field of home service can gain a first-hand knowledge of the nature of that work.

The four-day course will include a study of actual demonstrations, skits portraying different types of work, and practical instruction in the use and care of gas equipment.

Detailed programs of the course are being mailed to all home service directors. Others interested in receiving copies of the program may direct requests to Jessie McQueen, A. G. A. Headquarters, 420 Lexington Avenue, New York, N. Y.

New York-New Jersey Gas Sales Conference, May 18-19

HEADLINERS in the sales field will be featured at the New York-New Jersey Regional Gas Sales Conference which takes place May 18 and 19 at the Hotel New Yorker, New York City. This is a last of a series of outstanding conferences on domestic gas sales which have been sponsored this year by the Commercial Section. An unusual program, including forceful speakers, motion picture films and other features, has been arranged by the program committee.

W. J. Schmidt, Long Island Lighting Co., Mineola, N. Y., chairman of the New York-New Jersey Regional Gas Sales Council, will preside at the opening session, Wednesday morning. Following Mr. Schmidt's opening address, E. F. Jeffe, Consolidated Edison Co. of New York, will speak on "Sales Promotion of the Gas Industry." The Rochester Sales Plan will be discussed at this session by F. M. Houston, Rochester Gas & Electric Corp. An inspirational address entitled "Promotion as Keynote to Successful Sales" will be presented by B. Andrews, Street Railways Advertising Co., New York City.

Customer Relations Topic

Customer relations is the opening topic of the afternoon meeting, at which R. A. Koehler, Public Service Electric and Gas Co., will act as chairman. H. G. Weaver of General Motors Co., Detroit, has been invited to speak on this subject. The important part home service can play in water heater sales will be outlined at this session. Flora Dowler, Binghamton Gas Works, has been invited to cover this topic. J. P. Leinroth, Public Service Electric & Gas Co., will speak on "Merchandising in New Homes." The session will conclude with the showing of the film "House Practical." This film has proven highly popular with the hundreds of people who have seen it in the New Jersey territory.

The gas industry's part in the 1939 New York World's Fair will be described by H. P. J. Steinmetz, Public Service Electric & Gas Co., at the Thursday morning ses-

sion. C. A. Kennedy, vice-chairman of the sales council, is expected to preside at this meeting. A feature of this session will be a skit—"Making a Water Heater Sale"—by representatives of The Brooklyn Union Gas Company. Rounding out the program will be addresses by T. W. Halloran, New York Power and Light Corp., on "Selling Automatic Water Heating to Low Income Market" and by Frank Williams, American Gas Association, on "The Liberty Home Program."

The popular Handy McSaver Puppet Show will be presented at the Thursday luncheon meeting by Lyda Flanders, Worcester Gas Light Company.

The final session, Thursday afternoon, gets under way with the showing of the General Electric film, "The Right and Wrong Way To Sell." The Certified Performance Range will be discussed by Allan Tappan, Tappan Stove Co., Mansfield, Ohio. R. S. Agee, Association of Gas Appliance and Equipment Manufacturers, will close the conference with an address entitled "Join the Swing to Gas Heat."

Advance reports indicate that a record crowd will attend the conference.

Hartford Gas Co. Features National Ad Tie-in

THE A. G. A. national advertising slogan for 1938 was the keynote of The Hartford Gas Company All-Gas Display at a large Home Progress Exhibit in Hartford, Conn., during the week of March 12-19.

"Use Gas for the 4 Big Jobs in Your Home" was prominently flashed in large copy, and called to the attention of the more than 120,000 attendants.

In the center of a huge auditorium, the latest modern gas appliances—refrigerators, ranges, automatic water heaters and various gas house heating units, all on low black bases, were attractively displayed against white and Chinese red backgrounds.

While the gas refrigerators formed one complete group, gas kitchen heating ranges another, automatic water heaters yet another, and so on, the general color scheme and construction of each was similar, so that all of the units formed one large and impressive outlay occupying 1680 square feet laid out in the shape of the letter "T."

A modern "All-Gas Leisure Kitchen" featuring gas kitchen heating and gas refrigeration, with members of the Home Service Division in attendance, attracted much attention.

Special merchandising offers on refrigerators, ranges and automatic water heaters, backed by considerable newspaper advertising and good hard plugging on the part of every member of the New Business Department, resulted in the sale of 246 major gas appliances—68 automatic water heaters, 96 gas refrigerators, 80 gas ranges and 2 house heating units—having a total value of \$32,331.

This Hartford Times Progress Exposition, held each year in this area during the month of March, is a sure indication of spring to residents of central Connecticut.

Sponsored by the largest local paper, the show affords a very elaborate display of the latest household appliances of all types, labor-saving devices, hints on home decoration and many developments in new home building.

To us, it was simply another opportunity to tie in with the American Gas Association in their splendid nationwide drive to persuade families to "Live Well, Spend Wisely, Go Gas."—J. G. ELDER, supervisor, sales promotion, The Hartford Gas Company.



Partial views of The Hartford Gas Company's all-gas display at the Home Progress Exhibit

Industrial Gas Section

Hale A. Clark, Chairman

Eugene D. Milener, Secretary

Frank H. Trembly, Jr., Vice-Chairman

Desirability and Value of Industrial Gas Business



C. E. Bennett

THE value and desirability of industrial gas sales should be of interest, not only to every executive but to every industrial gas salesman and engineer. In these times of extreme scrutiny by Governmental regulatory bodies with a constant effort toward further rate reductions,

with proposed changes in methods of determining property values for rate making purposes and with many added burdens tending to constantly increase our operating costs, it behooves all of us to carefully analyze every phase of our business. In my opinion the most important job ahead of us today is sales. Balanced sales that will result in net revenue. Therefore, the question of an economic balance in the sale of our services deserves very careful consideration.

Manufactured Gas Viewpoint

For manufactured gas companies, the question of industrial sales presents quite a different problem than for natural gas companies—the reason being primarily due to the difference in the nature of the development and growth of the two industries and with which you are all familiar. Time will not permit a discussion of the problem as it relates to both industries and therefore I will confine my remarks on the subject as it relates to the natural gas business.

From a purely theoretical standpoint, with known costs and plant capacities, and if we were able to properly establish fair rates for all classes of business, this problem of obtaining an economic balance in sales would be comparatively easy to solve. Unfortunately the equation has some variable, unknown and uncontrollable factors, taking it far beyond any mathematical calculation.

In the first place, in considering the sale of gas for industrial purposes, we are actually selling a fuel in direct competition with other fuels. Therefore, the prices at which we can dispose of our fuel are limited and theoretically should fluctuate with other costs.

In the second place, the price at which we can sell gas for other purposes, although

By CHARLES E. BENNETT

President, The Manufacturers Light & Heat Co., Pittsburgh, Pa.

not so competitive as for industrial uses, is strictly regulated, and, in many instances, some of the gas for these services is being sold at a loss.

Under these circumstances, the problem is more practical than theoretical, requiring the best solution under existing conditions.

In an attempt to show the desirability and value of industrial sales, certain assumptions are necessary. General business conditions, periods of depression and prosperity, the available gas supply, future gas reserves, competitive conditions within proven gas fields and other factors all present difficulties in arriving at a fixed formula.

Normal Conditions Assumed

For the sake of clarity and to have a basis for arriving at certain conclusions, these assumptions are made as fairly representative of normal conditions.

First—That general business conditions are normal.

Second—That there is available an ample supply of gas with reasonable future reserves.

Third—That there are no unusual competitive field conditions which would require the disposal of so-called "dump" gas.

Fourth—That industrial rates have been established to yield a price for gas above certain costs of production and transportation to market.

I realize that the fourth assumption, viz.: that of rates and costs, is a variable and may be somewhat different for different companies but unless the price received is above a certain cost, whatever that may be, the value of industrial sales is questionable. Also, the rate for industrial business may vary, with the top limit competitive with the cost of other fuels and the low limit the cost above referred to. Here the rate design is all important as is the ability of the gas sales engineer to show that his fuel will meet competitive fuel costs.

With these assumptions, let us examine a few facts: At the outset I wish to state that in my judgment a logical development of industrial gas markets is absolutely essential—

First—If adequate service is to be maintained and rendered to domestic customers at present or even reasonable rates.

Second—If our industrial communities are to continue to prosper, enlarge their activities and maintain employment.

Third—If we wish to hold and enlarge our domestic load in these industrial communities and surrounding areas.

Fourth—If the stockholders' existing investment in these natural gas properties is to be protected.

The Pittsburgh group of properties, with which I am connected, serves approximately 286,000 customers, with an investment in production, transportation and distribution facilities of nearly \$100,000,000. Although the combined capacity of the entire system is not greatly in excess of the peak load requirements of our domestic and commercial customers, the revenue now derived from this business alone would fall far short of a reasonable return on the investment.

During the year 1936—the coldest year in this area since 1917—industrial deliveries amounted to 15,584,000,000 cu.ft., 42.3% of the total deliveries to all classes of customers. The maximum day's deliveries were 192,000,000 cu.ft. and occurred on January 27. In order to maintain service to our domestic customers on this particular day, it was necessary to curtail industrial deliveries to the extent of 15,000,000 cu.ft. The necessity for such action is quite unusual but the sudden cold spell and its continued duration taxed our facilities to the utmost. This situation, however, helps to illustrate the point in question.

Load Factor

On this particular peak day our industrial customers actually sold 38,000,000 cu.ft. and our deliveries to all other customers, chiefly domestic, were 154,000,000 cu.ft. Average daily industrial deliveries for the year were 42,000,000 cu.ft. while the daily average of the balance of our load was 58,200,000 cu.ft. Using actual industrial deliveries on this peak day gives a load factor on our industrial business of 112%. Larger industrial deliveries per day undoubtedly occurred but our records are not complete in this respect. However, further curtailment on other days was unnecessary due to lower domestic peaks. If we had been able to deliver the additional 15,000,000 cu.ft. on this peak day, our industrial load would have been 53,000,000 cu.ft. and the load factor 80.6%. The load factor for the balance of our business, chiefly domestic, was 37.8% and the combined load factor for all classes of customers during 1936 was 52.3%.

Re-stating these figures in a little different way, our industrial customers on the peak day required only 19.8% of our production and transportation capacity, yet they

purchased 42.3% of our total output during the year. All other classes of customers (chiefly domestic) required 80.2% of our capacity on the peak day and used only 57.7% of our year's output.

As we all know, and illustrated by these figures, our industrial business fills in the valleys of the load curve and utilizes a large portion of what otherwise would be idle capacity during periods of low demand by our domestic customers. This industrial business therefore has value in helping to pay the carrying charges on an investment, the major portion of which is required to render domestic service.

If expressed on a per MCF basis, our computations indicate that carrying charges are approximately 30% lower per MCF because of these industrial sales. This of course is not the only cost so affected. Other expense, as you know, remains constant, irrespective of the quantity of gas marketed.

In other words, with very little excess capacity and investment to safely take care of the peak load requirements of our domestic customers, probably not greatly in excess of what we would consider a fair margin of safety, we are able to take care of a reasonable amount of industrial business with relatively small additional cost over and above those costs that vary directly with the quantity of gas marketed.

Domestic Sales

The average sales per domestic customer in this area has shown a steady decline for several years and are now from 15 to 20% below 1930. It is difficult to say whether or not all of this decrease is reflected in peak load demands but I think it is reasonable to assume that there has been some reduction. The reasons for this decline have been discussed in numerous papers. It is my opinion that due to a change in living habits, there is some of this decrease in domestic consumption that cannot be considered temporary but must be recognized as permanent. The excess plant capacity, resulting from any permanent loss in domestic load, can and should be utilized through added industrial markets.

As you can readily see a reasonable amount of industrial sales at adequate rates will reduce the overall MCF costs and can be of benefit to the domestic customers by making it possible to maintain more attractive rates and thus permit them to more fully utilize our service for their comfort and convenience.

The extent to which industrial sales are desirable and of value to the company depends quite largely on the facilities at hand to render the service or the cost involved to enlarge the service to take care of any additional industrial business. Of course the latter is principally an economic question, dependent upon volume and the price at which industrial gas can be marketed.

It is my opinion this so-called economic balance in our sales is extremely important. While from the standpoint of annual load factor, industrial sales are valuable and desirable, experience has shown that through periods of prosperity and depression, there

is a very wide fluctuation in this business, not only in the quantity sold from year to year but also in the price at which this business must be sold in order to hold it.

Our domestic business is much more stable and has often been referred to as our "back-log." Since the net revenue derived from industrial sales cannot help but be reflected in the price received for our domestic business, an economic balance in these two classes of service will help to stabilize net revenues from year to year and maintain reasonable rates.

Our stockholders have a right to expect reasonable and regular returns on their investment and we, who are responsible for the operations and earnings, must assume that obligation.

You industrial gas men can really do much in establishing the desirability and value of industrial business, in fact, are largely responsible. The obtaining of new business is only part of your job. Because of competitive fuels, our present business is always in jeopardy. Oftentimes the ex-

penditure of a considerable sum of money was necessary to obtain this business originally. To keep it sold and protect this investment is a part of your job that should not be overlooked. In net revenue it is usually more valuable to hold present business than to obtain new business.

I do not mean to infer that new business is not important. Of course it is and must be given constant attention, but always bear in mind that new business is only desirable when it is valuable, and it is only valuable when it produces additional net revenue.

In selling a fuel—a superior fuel, and this is what you are doing—all of the advantages such as efficiency, a better finished product, fewer rejects, labor saving and other benefits, should be credited to gas, when making a comparison of the cost with competitive fuels.

I realize that it is sometimes difficult to sell the customer on some of these advantages. It takes earnest and continued

(Continued on page 199)

Hotel, Restaurant and Commercial Sales Conference, May 23-24

INDUSTRIAL gas men and gas company executives as well as hotel and restaurant men are looking forward with unusual interest to the A. G. A. Hotel, Restaurant and Commercial Sales Conference to be held in the Commodore Hotel, adjoining Grand Central Terminal, New York City, May 23-24. This conference is of special significance now that gas equipment must be moved at a faster clip, and every effort made to present a forceful and telling program.

The conference will be sponsored jointly by the A. G. A. Industrial Gas Section, and the Metropolitan Industrial Gas Sales Council. Hale A. Clark, Detroit City Gas Co., is chairman of the Industrial Gas Section and Alva L. Palmer, The Brooklyn Union Gas Co., is chairman of the sales council.

Anticipating the needs of the industrial and commercial sections of the gas industry the Subcommittee on Program, Joseph F. Quinn, The Brooklyn Union Gas Co., chairman, has been making strenuous efforts to prepare a program that will hit an all-time high in new and constructive information.

This program is divided into four general subjects. Starting Monday morning the keynote of the conference, sales and sales promotion, will be brought out in the opening address by a prominent utility executive. The general subject for the forenoon will be "Getting 100 Cents of the Commercial Cooking Dollar," and, with Hale A. Clark presiding, interesting papers on Cooking, Baking, and Counter Work will be delivered. At this session K. L. Childs, president, Automatic Food Equipment, Inc., Somerville, Mass., and inventor of the new and modern short order gas fryer, known as the Shal-O-Fryer, will talk on "Advanced Technique in Fat Frying."

The luncheon speaker will be Zenn Kaufman who will speak on "Showmanship in Business." Mr. Kaufman is an internationally known authority on matters of sales promotion. Associated with Dale Carnegie, he is also co-author with Kenneth M. Goode of the best seller, "Showmanship in Business," and has been a feature speaker at many national conventions.

Frank H. Trembly, Jr., The Philadelphia Gas Works Co. and vice-chairman, Industrial Gas Section, will preside at the Monday afternoon session. The subject will be "Selling Complete Gas Service to Commercial Customers" and the papers will cover the use of gas in Beauty Shops, Confectionery Shops, Tailor Shops and Garages and Other Establishments.

Tuesday morning, Joseph F. Quinn will preside and the time will be devoted to "What's New In Commercial Gas Appliances." Papers to be delivered include "Water Heating" by Walter G. Groth, United American Bosch Corp.; "Refrigeration" by Frederick C. Neuls, The Brooklyn Union Gas Co.; "Baking" by Clayton S. Cronkright, Public Service Electric & Gas Co. The final paper will be on "Cooking" by L. B. Crossman, Boston Consolidated Gas Co.

"How a Customer Evaluates Commercial Gas Service" will occupy part of Tuesday afternoon. Another paper will be on "New Approaches to Commercial Heating Sales" by R. A. Bell, Surface Combustion Corp., followed by a Sales Demonstration Skit in two parts, entitled "Selling Gas Equipment to a Barber!"

The Managing Committee of the Industrial Gas Section will meet at the Commodore Hotel immediately after adjournment of the Tuesday afternoon session.

Technical Section

J. V. Postles, Chairman

H. W. Hartman, Secretary

F. M. Goodwin, Vice-Chairman

Strong Program Arranged for Annual Gas Production and Chemical Conference



Charles R. Locke

An outstanding event of the year, the program will include a wide variety of technical subjects. Experts on different phases of gas operating practice will cover current problems and developments. Round table luncheon conferences on May 24 will be a feature of the meeting.

Charles R. Locke, assistant superintendent of the Chicago By-Product Coke Company, chairman of the Gas Production Committee, and Dr. J. J. Morgan, professor of chemical engineering at Columbia University, chairman of the Chemical Committee, will preside at the joint sessions. Speakers at the opening session include N. C. McGowen and Alexander Forward, president and managing director, respectively, of the Association.

Following is a brief summary of some of the papers which will be presented:

PRODUCTION COMMITTEE PAPERS

TIME MARCHES ON—WHERE IS MANUFACTURED GAS MARCHING?

A. M. Beebe

This paper analyzes the various economic factors confronting the manufactured gas industry and attempts to evaluate their effect on its future. The revolution of general economics, both industrially and in research, is discussed with a view to formulating plans for the future.

The paper reviews some of the many basic fundamental studies of the manufactured gas industry which have been made in recent years. It also analyzes the general manufactured gas generation situation and shows the soundness of supplying cooking and water heating requirements of the country by gas. It points out the absolute folly of developing water power for such purposes in our country.

HOLDER INSPECTION AND MAINTENANCE

C. S. Goldsmith

What is encountered and what must be done in order to keep holders in a state of

high operating efficiency are brought out in this paper. During the presentation motion pictures of actual repair work in progress will be given. This paper should be particularly interesting to all those who have holders under their supervision.

A SYMPOSIUM ON THE EXPANSION AND PLASTIC DEFORMATION IN COAL

V. J. Altieri, W. T. Brown,
J. D. Davis, C. C. Russell

These authors will present the results of independent investigations on the stresses, strains and other effects produced by coal during the coking process. Descriptions and illustrations of the various types of apparatus used in conducting these tests will be given as well as test results on various coals together with all pertinent fundamental data.

FOUNDRY COKE

B. P. Mulcahy

In this paper the author first compares the functions of foundry coke, blast furnace coke and domestic coke in their respective requirements, pointing out the inherent differences and similarities in each instance; next, a brief outline of present coke-testing methods will be given pointing out particularly the limitations of these tests as they apply specifically to foundry coke. Finally, a study of the requirements of a foundry coke from the cupola operator's standpoint and the possible incorporation of these requirements in a foundry coke will be given. This is to be supplemented by a suggested list of tests to be considered.

ANTICIPATION OF COKE PLANT ACCIDENTS

Charles Koons

This paper will present a summary of the status of safety in coke plants compiled from replies to a safety questionnaire sent out last year to nineteen coke plants. Included also is a list of specific "hidden hazards" of the mechanical type. The balance of the paper deals with the "human hazard" and will analyze physical, mental or psychological causes and their accident effects.

CHEMICAL COMMITTEE PAPERS

PRACTICAL RESULTS IN PRIMARY PHOSPHATE TREATMENT OF BOILER FEED WATER

Lee Robey and Marlow Perry

In this paper Mr. Robey will discuss the chemistry and describe the apparatus involved in adaption of primary phosphate treatment to a continuous hot process of

boiler feed water softening.

Following this Mr. Perry will present the experience and results obtained in the use of the process over a period of approximately one year.

CHEMICAL ASPECTS OF CARBOSEAL

Dr. John R. Skeen

Dr. J. J. Morgan

Carboseal is a liquid which may be either poured or atomized into gas mains. It is designed to stop leaks in bell and spigot joints effectively, whether these joints are sealed with lead or cement. In addition it has merit in laying dust.

Carboseal has been available to the gas industry for two years, and several papers dealing with practical aspects and experience have been presented. It has proven economically successful and has attracted wide interest. Recently efforts to imitate it have been made. It is believed, therefore, that a discussion of the nature, cause and correction of leaks in B. and S. joints and of the adaptability of Carboseal as a remedy is timely.

In the presentation the functions of the jute caulking and of the solid seals are described, the mechanism of leak stoppage by a liquid discussed and the desirable characteristics of such liquid given. Research evidence with over 100 compounds is presented to show that Carboseal is the desired liquid.

METHODS FOR THE DETERMINATION OF THE SPECIFIC GRAVITY OF GASES

Dr. C. W. Wilson

In this paper the author avers that the determination of the specific gravity of gases can be made much more accurately than is usually done. Errors enter into the results because of a lack of appreciation of the approximations involved in the physical principles as applied in the methods used, as well as from lack of proper precautions in making the actual determinations. A number of these errors are pointed out, and means for eliminating them are suggested, with particular reference to equipment commercially available for laboratory use.

Specifically, the following points are discussed: (1) The definition of the specific gravity of a gas; (2) the application of Boyle's law and the laws of effusion to



specific gravity balances and effusion instruments, respectively; (3) manipulative precautions necessary in the use of these instruments in the laboratory.

APPLIED ASPECTS OF FLAMES AND FLAME VELOCITIES

A. R. T. Denués

This paper aims to review briefly recent research relating to flame and combustion, and to consider from a practical standpoint certain specific applied aspects of this work.

It surveys briefly the variables affecting combustion characteristics, indicates the significance of considerations of flame velocity and treats recent data relating thereto. Recent investigations on flames, burner operation, and flame propagation are also reviewed and the outlook in these fields disclosed.

Among specific applied aspects discussed are the importance and application of flame velocity considerations in gas manufacture, the practical problems of estimation of combustion characteristics, and the nature and significance of such quantities related to the rating of gases as mass burning velocity and flame output.

In conclusion the author will give a summary which stresses the import of the work reviewed in gas manufacture and appliance operation.

MICROCHEMISTRY IN THE GAS INDUSTRY—PART I

R. J. Sheridan

Microchemistry includes all of those methods applicable when the available sample is smaller than that ordinarily required for quantitative analysis. Chemical Microscopy is an important division of the subject, and includes all those operations where the microscope is peculiarly adaptable for the observation and identification of characteristic phenomena. Several examples are given in detail; e.g., micrometry, melting points, refractive indices, and polarization tests.

In the general field of Microchemistry where the microscope is not exclusively used, some of the more familiar methods for the analysis of alloys, minerals, ores, fibers, and pigments are discussed. Many of these micromethods may be of considerable advantage to the gas industry. Specific instances are cited where micromethods have been helpful, particularly in the solution of the gum problem, the analysis of gas, and the ultimate analysis of fuels.

The committee is aware of the growing importance of this branch of chemistry and had planned a thorough search of the literature to review whatever has been published in English during the last ten or twelve years which is of special interest to the industry. The number of likely articles, however, proved so large that these findings will be submitted at a later date as Part Two of this paper.

Gas Chemists' Handbook

In addition to the papers outlined, it is expected that H. Shnidman, chairman of the Editorial Committee on the Revision

of the Gas Chemists' Handbook, will report on the first volume entitled, "Fuel-flue Gases."

Luncheon Conferences

The Tuesday afternoon session will be devoted to the Luncheon Conferences which during past years have proved such a desirable addition to the formal program of these meetings. These give the proper atmosphere for an informal discussion of the many problems not covered in the more elaborate investigations presented at the other sessions. Here everyone will have the opportunity to ask questions and speak as he pleases. The meeting is to be strictly informal in every respect. The number of luncheon meetings has been limited to the following three: Coal Carbonization and By-Products, Water Gas, and Chemical Aids in Operating Problems.

The luncheon conference sponsored this year by the Chemical Committee will be conducted by R. F. Tenney of the Queensborough Gas and Electric Co. of Far Rockaway, N. Y., with E. M. Bliss of the Public Service Electric and Gas Co. as vice-chairman. The title, Chemical Aids in Operating Problems, has been chosen to indicate that the discussions should be of interest to operating men as well as to those from the laboratories. A preliminary list of topics includes: Methods of treatment for boiler feed waters, disposal of waste

waters from gas plants, condensates from purifying boxes and their relation to box control, cracking and other laboratory tests in evaluation of heavy oils for carburetion, and special methods for alleviation of plant corrosion.

The Coal Carbonization luncheon meeting will be held under the chairmanship of A. C. Sedlachek, of the Philadelphia Coke Co., Philadelphia. A number of important topics are being arranged for discussion, although there is no limitation to the scope of the material covered.

R. VanVliet of the New York and Richmond Gas Co., Stapleton, Staten Island, N. Y., will act as chairman of the Water Gas luncheon conference. An attempt has been made to include many timely subjects at this meeting. Among those which will be discussed are the following: Manufacture of high B.t.u. gas and plant use of butane, the use of bituminous coal as a generator fuel, special shapes and quality of water gas set refractories, use of Bunker C oil with its new processes such as the Semet-Solvay counterflow set, and other matters of interest to water gas operations.

With this material available for discussion, in addition to other subjects which may develop from the papers to be presented during the conference or may exist in the minds of those planning to attend this meeting, a very active and interesting afternoon is in store for those who attend.

Distribution Luncheon Meetings Bring Out Live Discussion

By CHARLES F. TURNER

The East Ohio Gas Co.
Cleveland, Ohio

FOLLOWING the custom of previous years, the opening session of the Distribution Conference was followed by the Luncheon Conferences which have proven so popular. The five conferences originally planned and announced were reduced to three because of the great popularity of "Appliance Servicing," "Meters and Regulation" and "Employee Training." "Year-round Air Conditioning" was included with "Appliance Installation and Servicing"; "Utility-Dealer Relationships" was included with "Employee Training and Classification."

The group on "Installation and Servicing of Appliances" was very ably headed by W. A. Dunkley, chairman, and Aaron Bush, co-chairman.

Some time was spent in discussing supplemental testing of appliances by utilities in addition to the Laboratory Seal. The smaller companies seem to accept the Seal as sufficient though some rely upon supplementary tests of larger companies. Many of the larger utilities maintain their own laboratories in which appliances are tested for specific purposes or because

some local condition makes supplementary tests advisable.

The use of semi-rigid copper and aluminum tubing for range connections was discussed at considerable length. The use of these connectors seems to be on the increase. In fact they seem to be almost indispensable when connecting ranges designed to go against the wall or into alcoves. Certain makes of both types have been approved by the Testing Laboratories and little or no trouble seems to have been experienced so far with approved tubings. The difficulties which have been experienced appear to have arisen from the use of inferior non-approved tubings with questionable couplings.

The use of regulators on individual appliances was given prominence in the discussions. Regulators on refrigerators, floor furnaces and central heating equipment seem in fairly general use, but they are rather infrequently used on other appliances. Increased house heating load will in general have a tendency to increase main pressures and this may result in the wider use of individual regulators.

The extent of the program and the interest exhibited kept the meeting in session until 5:30 P.M.



Luncheon meeting of the Gas Measurement and Pressure Regulation group at the Distribution Conference

A very lively afternoon was spent by the section which discussed "Gas Measurement," "Pressure Regulation and Pipe." C. L. Nairne with the excellent assistance of G. Heckendorn kept things moving at a fast pace with the result that a great deal of ground was covered in these three subjects. Adding to the interest was the fact that there has been nothing on pressure regulation for the past two or three years, during which time considerable improvement has been made in district regulator station design and regulation in general.

Meter Standardization

The first topic introduced was the matter of meter standardization. Mr. Allen, chairman of the Meter Subcommittee, gave a brief but comprehensive progress report of the activities of his committee. The objectives of the work were: (1) standardization; (2) development of inspection forms for particular use in meter repairs; (3) a bibliography of literature on gas meters. The indications are that particular emphasis will be placed on standardization and the development of suitable forms.

Representatives of several meter manufacturers stressed the desirability of reducing the variations in specifications of meters regularly ordered by gas companies, pointing out the advantages with particular reference to reduction in manufacturing costs and elimination of peak loads on meter plant. One representative listed in rapid-fire order the different indices now available for a small meter; in some instances there are 150 varieties available.

There seemed to be a general feeling that index covers serve no useful purpose and might well be omitted. The question was raised as to the advisability of omitting also the $\frac{1}{2}$ ft. dial used on some meters. Certain objections to this suggestion were raised by those who use it in connection with leak tests. The suggestion was advanced that perhaps the circle on the 2 ft. dial might be enlarged and a longer hand used which would enable the observer to note smaller movements of the hand, thus eliminating the necessity of the $\frac{1}{2}$ ft. dial.

Considerable advance seems to have been made in the technique of testing large meters in situ. In general it is conceded to be an accurate and practicable method which is gaining favor among companies having large positive meters in use over rather wide areas.

Everyone was interested in learning all they could about the economics of locked meters. Some of the discussion touched upon points which were dealt with in detail at a later session by Mr. Allen in his very excellent paper, "The Economics of Metering."

Pressure Regulation

In the discussion on Pressure Regulation several told of their experiences with district regulator stations and pointed out the relative advantages and disadvantages of below ground and above ground stations. There appears to be some trend toward the use of automatic regulator controls and long distance pressure indicators. Many other interesting and informative points were brought out.

Before entering upon a discussion of Pipe and subjects related to it, a short intermission was taken. The fact that very few left the meeting indicated the interest which was taken in the discussions. The first subject discussed under Pipe was the use of copper. In the broader aspects of its use it was developed that the price of copper seems to have relatively little influence upon the total installation cost.

Several ingenious schemes were described for locating and eliminating main trappings.

The usual interest was exhibited in the types of coatings and couplings and again it was observed that ideas vary with local conditions.

This meeting adjourned at about 4:45 P.M. after covering a lot of territory over a wide variety of subjects.

Dealer Cooperation

T. J. Perry, chairman, and C. S. Hazel, co-chairman, proved to be ideal running mates and together conducted a lively meeting on "Employee Training and Classification" and "Utility-Dealer Cooperation."

Among those companies which promote the sale of gas appliances only through plumber and dealer organizations it is recognized that training of the personnel of these organizations is as important as that of the utility personnel. With the increasing use of automatic devices for controlling appliances the need for training is becoming increasingly evident. Many companies are now providing training courses for dealer



The Appliance Installation and Servicing Luncheon Conference

organizations at frequent intervals. One large utility has in effect a most complete plan and exhibited samples of the instruction books which are used not only in the dealer classes but in classes for their own employees.

Other companies hand out to the dealers and plumbers from time to time information on appliance installation and adjustment and provide instructors for meetings held by the dealers themselves.

Some discussion was had on the extent to which utilities assume responsibility for appliances installed by dealers. In some instances companies assume full responsibility for all such appliances, in other cases only for those of which the installation has been approved. All companies, of course, assume responsibility for troubles traceable to the gas system such as stoppage due to dirt or water, dust, low pressure, etc.

In this meeting, also, the use of semi-rigid range connections was discussed. In some sections of the country plumbers are objecting to the use of such connections believing that they will result in a loss of appliance connecting business. Some doubt was expressed as to whether copper and aluminum tubings will prove to be as satisfactory as rigid pipe. Although several companies have employed tubings of smaller size for some time in the connecting of refrigerators, not many have had much experience in the use of larger sizes for range connections.

Employee Training

It appears to be general practice to offer employee training courses on company time. In some companies certain types of training are provided on employee time. A very thorough and instructive program of training for small scattered properties was discussed and brought forth favorable comment.

Most companies maintain a full time instructor who may or may not call upon supervisors, service men, manufacturers' representatives, etc. to cooperate with him in training programs. One point on which everyone agreed was, that more training should be done—not only more training with the objective of better mechanical operation, but also of better customer relations.

In the classifying of employee and job a number of systems was discussed. Some depend upon automatic pay increases after stated intervals, some upon advances from jobs of lesser skill to those of greater skill with accompanying pay increases. In general specialists in appliance adjustment are the highest paid service men. Considerable thought was expressed on the practicability of training men to be all 'round service men as compared with specialized training and special service men. With the constant increase in the number of automatic and complicated devices, the decision on this policy becomes increasingly difficult.

Most companies provide for paying the hourly man during vacations and sickness.

There was no agreement of practice in this respect, but in some companies the payments were higher in the case of salaried employees; in other cases they were the same for salaried and hourly employees.

The forty-hour week seems to be more or less in general use and several schemes were described whereby attempts are made to level out a man's pay over slack and busy seasons so that he may be assured a rather uniform weekly pay. Most of these plans were of the give and take variety.

In general most companies report expansion in employee benefit plans particularly with reference to wage scales, vacations and sickness allowances.

This group disbanded at about 4:30 P.M. with the general feeling that a profitable afternoon had been spent.

DISTRIBUTION CONFERENCE

(Continued from page 179)

L. W. Tuttle, chairman of the Committee on Pipe Joints and Pipe Materials, presented a progress report for that committee. The committee has started a study of the boltless type of joint. Data on changeovers from manufactured to natural gas were reviewed.

Some of the ways in which a chemical engineer may be of assistance in the operation of distribution activities, were outlined in a paper by George E. Ludwig, Grand Rapids Gas Light Co., entitled "The Chemist's Place in the Distribution Department." The chemical engineer should be in active contact with the distribution department, he stated, and in companies of sufficient size, could very well find full time employment in such service. He suggested more frequent use of the Chemical Committee by the Distribution Committee in the investigation of problems of a chemical nature.

An outstanding contribution to the subject "The Economics of Metering" was made by D. P. Allen, Washington Gas Light Co. Mr. Allen presented the details of a comprehensive study of meter shop practices in his company and establishment of new policies which resulted in marked savings in the cost of metering. In summarizing the results of this study, he stated: "It would appear that to attain the lowest average accumulative cost per meter year, no new diaphragm repairs should be given after the end of the third average service period; that all of the remaining meters should be condemned when they reach the age of approximately 22 years; and that our policy of giving a large number of partial repairs instead of general and new diaphragm repairs, had been sound." It is estimated that the Washington company will make a minimum saving of \$7500 as a result of the new policy adopted.

The final paper by M. E. Shea, Roanoke Gas Light Co., dealt with the introduction of tetralin into a distribution system by portable equipment. The treatment

had proved highly effective in preventing stoppage of mains, he brought out, and indicated that it should have general application in the industry.

Pipe Joint Catalogue

A NEW catalogue entitled "U. S. Joint Pipe and Fittings" has been made available by the United States Pipe and Foundry Company, Burlington, N. J. It contains considerable descriptive material and standard specifications on pipe joints and fittings which should be useful to gas and pipeline companies. Illustrations of typical installations that have been made in gas, water and industrial fields are shown in the booklet.

Especially emphasized in the catalogue is the bottle-tight feature of the U. S. Joint which, it is asserted, was developed primarily to meet changing conditions in the gas industry. These conditions are the more prevalent use of natural gas and drier manufactured gas combined with considerably increased operating pressures.

Gas Calorimeter Tables

A HANDBOOK on Gas Calorimeter Tables, known as Circular C417, has been issued by the U. S. Department of Commerce, National Bureau of Standards. This Circular contains condensed directions for operating a flow calorimeter for gases, with forms and directions for recording and computing results; tables of "reduction factors" for gas volumes, between 32 and 110 degrees F. and from 30.9 in. of mercury pressure; and tables of the corrections needed in calorimetric work.

Blank forms are included to be filled in with data pertaining to local situations and individual laboratory instruments, so that the user may have all data needed in calorimetry conveniently arranged under one cover.

This Circular replaces an earlier Bureau publication, Circular 65, which has been widely used for 20 years as a laboratory handbook.

Takes Over Consumers Natural Co.

ROSS BYRON, president of Southern Union Gas Co., has announced formation of the New Mexico Eastern Gas Co. to take over all properties formerly owned by Consumers Natural Gas Co. and its subsidiaries.

New Mexico Eastern will operate as a subsidiary of Southern Union. The consolidation is a step in the simplification of the Southern Union corporate structure, as a result of which all subholding companies have been eliminated.

Testing Laboratories

R. M. Conner, Director

Chairman Managing Committee, N. T. Sellman

Hotel and Restaurant Range Requirements Endorsed as American Standard



Subcommittee on Approval Requirements for Hotel and Restaurant Ranges. Left to right: G. S. Morley, Majestic Manufacturing Co., St. Louis; Lee Van Cleave, Majestic Manufacturing Co.; I. V. Brumbaugh, American Stove Co., St. Louis; F. R. Wright (guest), A. G. A.; R. M. Conner (guest), A. G. A.; T. J. Gallagher (chairman), The Peoples Gas Light & Coke Co., Chicago; H. W. Cairnes (for Chas. Ness), Carbide & Carbon Chemicals Co., Indianapolis; W. Z. Friend, Phillips Petroleum Co., Detroit; W. M. Couzens (guest), A. G. A.; R. C. Gregg (guest), A. G. A.; C. C. Winterstein, The United Gas Improvement Co., Philadelphia; W. D. Antrim, Roberts & Mander Stove Co., Philadelphia

ONE of the most important factors in making effective any standardization program is the periodic revision of standards in line with the latest developments and current concepts of design, construction and performance. In line with this policy, the Subcommittee on Approval Requirements for Hotel and Restaurant Ranges and the A.S.A. Sectional Committee, Project Z21, A. G. A. Approval Requirements Committee, during the year 1936 and the early part of 1937, prepared a revised edition of the Approval Requirements for gas-operated hotel and restaurant ranges which was approved as American Standard on October 22, 1937.

Extensive Research

In the preparation of these revised requirements, extensive research was conducted at the American Gas Association Testing Laboratories in Cleveland for the committees concerned. Certain phases of this study dealing with requirements for efficiency of solid top and fry top hotel and restaurant ranges were extended during the latter part of the year 1937, with the result that additional requirements covering these features were completed after approval of the revised edition of the standards on October 22. Feeling that these additional requirements should be included in the published standards, they were accordingly referred to the American Standards Association for endorsement. A further revised edition of the standards including the requirements referred to was, consequently, approved as American Standard on March 3 of this year.

By FRANKLIN R. WRIGHT

A. G. A. Testing Laboratories

It is felt that the principal differences between the latest revised edition of the hotel and restaurant range requirements and the previously published edition, Z21.3-1932, which became effective November 1, 1933, might be of interest.

The latest edition of the standards is much more comprehensive and rigid than the ones issued late in 1932, including approximately twice as many requirements and stipulations as were previously specified. The latest requirements have been extensively correlated with the various American Standard Listing Requirements for gas appliance accessories. In addition, a number of other constructional and performance requirements have been added which were designed to insure all around better and more satisfactory ranges from the standpoint of construction, durability and performance.

The standards also were expanded to cover hotel and restaurant ranges for use with propane gas, commonly known as bottled gas, and butane-air gas. These latter additions were made in order that ranges certified might be available for roadside stands, small communities beyond the reach of city gas mains and for villages where natural or manufactured gases are not available but which are now supplied with butane-air.

In 1931, the Association decided to extend its certification program to cover vari-

ous types of gas appliance accessories such as burner valves, draft hoods, domestic gas appliance pressure regulators, thermostats and many other types of accessories commonly used on gas appliances. Subcommittees of the A.S.A. Sectional Committee, Project Z21, A. G. A. Approval Requirements Committee, were accordingly organized to draft detailed construction and performance standards for such accessories.

To differentiate these standards from those applying to complete gas burning appliances, they were termed "Listing Requirements" rather than "Approval Requirements." In other words, Approval Requirements apply to complete gas burning appliances, whereas, Listing Requirements apply only to accessories, the latter depending to some extent for their safe and satisfactory performance upon the method and manner of their installation.

Certifying a Thermostat

A hotel and restaurant range, for example, is certified for compliance with American Standards as a complete gas burning unit. In certifying a thermostat, however, it is not possible at the time to determine just how, eventually, that thermostat will be installed in an oven. When a thermostat is installed properly it will, of course, function satisfactorily. It might, however, be installed in an oven in such a way as to not properly register and regulate temperatures. The Listing Requirements cover the details of design, construction and performance of thermostats, the performance requirements being applied under conditions simulating actual service. These

Listing Requirements are then referred to and made a part of the Approval Requirements and further requirements are included in the approval standards which provide for additional tests on the range with the thermostat installed in the way provided by the manufacturer.

In this manner the two standards are tied in together to give the ultimate consumer the benefit, by providing that the accessories are not only inherently correctly designed and durable, but that their performance is satisfactory as applied to a particular appliance.

Space does not permit a detailed discussion of all of the various revisions and additions to the hotel and restaurant range standards. It may be said, however, that nearly every one of the previous requirements was revised and strengthened while a number applying to both construction and performance were added. Several of the latter type are of particular interest.

Minimum efficiency requirements have been added for open top, fry top and solid top ranges which should insure a satisfactory degree of economy in the operation of such units. Likewise, a Performance Requirement limiting the amount of gas required to maintain temperatures in hotel and restaurant range ovens has been included. Performance Requirements have also been added insuring speed of heating of broilers and similar provisions applying to ovens have been strengthened.

Domestic Standards Followed

In general, the revised standards for hotel and restaurant ranges follow the same general lines as the American Standard Approval Requirements for Domestic Gas Ranges, Z21.1-1937. In many instances provisions as to construction and performance, particularly of parts and accessories, are the same for both domestic ranges and hotel and restaurant ranges. As hotel and restaurant ranges are, of course, designed for and subjected to heavier duty than domestic ranges, greater weights of material and strength of parts are required for hotel and restaurant ranges than are necessary or specified for domestic ranges.

As an example of this, grates of hotel and restaurant ranges are subjected to a load of 300 pounds applied over an area of only 9 inches in diameter at the center of the grate. In the case of solid top ranges, a load of 800 pounds is applied over an area of only 16 inches in diameter at the center of the top. In addition, a load of 800 pounds is applied to the two weakest members of the top of the range to insure rigid frame and body construction. In the case of domestic ranges, a load of only 300 pounds is applied on the top. Likewise, dropped doors of domestic ranges are required to withstand a load of 100 pounds applied on them without damage or breakage of any part, but in the case of hotel and restaurant ranges of the heavy-duty type, the load is 400 pounds and for light-duty types, 200 pounds.

These will serve to indicate in general, differences in the provisions of the domestic

range requirements as compared with those for hotel and restaurant ranges. Due to inherent differences in the functions of hotel and restaurant ranges as compared with domestic ranges, coupled with differences in their manner of use, there naturally are certain differences in some of the Performance Requirements.

Since 1933 more than 368 models of hotel and restaurant ranges have been certified by the A. G. A. Testing Laboratories as complying with the American Standard Approval Requirements. As is the case with all gas appliances approved by the Association, hotel and restaurant ranges are required by that organization when certified to have displayed on them the Laboratory

Seal of Approval which is a 5-pointed blue star inscribed within two concentric circles and bearing the inscription, "Complies with National Safety Requirements. Approved. American Gas Association."

The standardization work on hotel and restaurant ranges, similar to the testing and certification program carried out on all domestic gas appliances during the past twelve years, has proven to be of inestimable value not only to producers and utility companies but to the purchasers and users of such equipment. At the present time the great majority of hotel and restaurant ranges offered for sale have been certified in accordance with American Standards and bear the Laboratory Approval Seal.

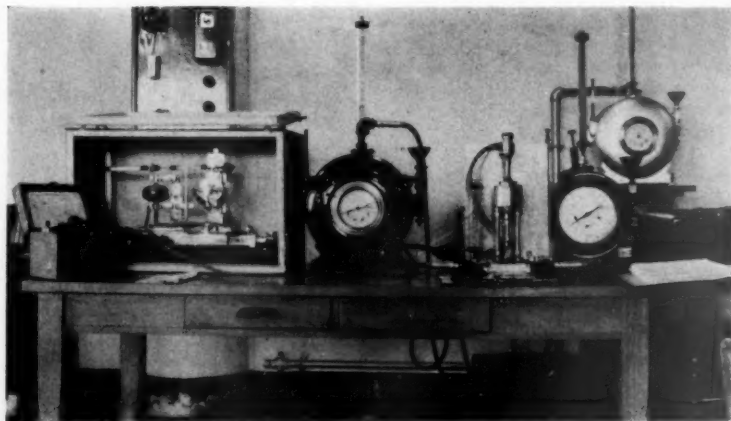
Laboratories Check Test Gases

THE periodical calibration and checking of all testing equipment has long been an established practice at the American Gas Association Testing Laboratories. It is usually thought that such procedure would include only the physical instruments used in the conduct of tests for approval of gas appliances. But this work of continually searching for the most accurate means of detecting and measuring also includes one of the most important of all "instruments" used in the Association's approval and certification program and that is the kinds of gas used at the Laboratories for the accurate detection of the slightest fault that might be found in appliance operation during approval tests. Not only must these test gases represent wide differences in burning characteristics as found in various localities throughout this country and Canada, but they should also encompass equally wide variations in specific gravity which is an important factor in effecting air injecting characteristics.

When the Laboratories were established in 1925 the problem of selecting test gases was satisfied only after gases from all parts of the country were duplicated in Cleve-

land and burned in various appliances. It was found at that time that the natural gas available in Cleveland was representative of all natural gas being supplied throughout the United States. Manufactured gases similar to those distributed in many principal cities were duplicated and it was further found that the Cleveland supply of manufactured (coke oven) gas was not only similar but in most cases as representative as a test gas as any other manufactured supply. Therefore, these two gases, natural gas of 1135 B.t.u./cu.ft. and 0.63 sp.gr. and manufactured gas of 535 B.t.u./cu.ft. and 0.37 sp.gr., together with a high sp.gr. low B.t.u. carburetted water gas of 400 B.t.u./cu.ft. and 0.7 sp.gr. constituted a range in heating values from 400 to 1135 B.t.u./cu.ft. and sp.gr. of from 0.37 to 0.7 which completely encompassed all gases being distributed for domestic uses at that time.

Although great changes in gas supplies have taken place since 1925 particularly in the expansion of natural gas service and the mixing of natural and manufactured gases, a second survey of field conditions of gas service made in 1932 to 1934 to check the



Laboratories field equipment used in test gas survey

Laboratories test gases resulted in no change in the gases or pressures utilized for test purposes.

A third investigation of Laboratories test gases and test pressures is now in progress and is planned to be completed around May 1. This study differs from the first two in that the survey will include, in addition to the previous methods of statistical reviews and of synthesizing gases, a series of tests made in the field by representatives of the Laboratories. Not only will appliance operation under a variety of gas conditions be studied but actual testing of the gases in a number of large cities is being conducted. Thus, direct comparison of the combustion characteristics of all the various gases in the field can be made with the gases now employed at the Laboratories for test purposes. Equipment from the Lab-

oratories including precision test burners, wet test meters, potentiometers, a micro-manometer, gages, and other incidental but necessary instruments are being transported from one city to another to gather the required data.

The Laboratories' engineers have thus far covered over 2000 miles and visited ten large gas distributing areas in order to obtain firsthand the extreme conditions of gas service in the field. Both natural and manufactured as well as mixed gas territories are being visited in the survey and when completed the investigation will, no doubt, yield sufficient information on the comparison of actual and practical gas distribution conditions with those gas conditions under which all gas appliances are tested for compliance with American Gas Association approval requirements.

Manufacturers Visit A. G. A. Laboratories



Shown here are six manufacturer representatives from Tennessee and Kentucky with the director of the A. G. A. Testing Laboratories. This is the largest group of manufacturers from this area to be at the Laboratories at any one time. Left to right, are: James White, Gray & Dudley Co., Nashville; W. F. Lukemeier, Peerless Mfg. Corp., Louisville; L. O. Morin, Jr., Samuel Stamping & Enameling Co., Chattanooga; R. M. Conner, Director, A. G. A. Testing Laboratories, Cleveland; R. C. McCauley, Tennessee Enamel Mfg. Co., Nashville; H. Sprott, Phillips and Buttriff Mfg. Co., Nashville; J. Ryan, Samuel Stamping & Enameling Co., Chattanooga

Requirements for Pressure Regulators Revised



Subcommittee on Listing Requirements for Domestic Gas Appliance Pressure Regulators at a meeting in Cleveland, March 25. Left to right are: W. M. Couzens (guest), A. G. A.; A. B. Cloud (representing F. H. Payne), The American Meter Co., Inc.; F. R. Wright (guest), A. G. A.; P. C. Wiesner, New York Power & Light Corp.; A. D. MacLean (acting chairman, representing W. F. Rockwell), Pittsburgh Equitable Meter Co.; Floyd Gaunt, Reynolds Gas Regulator Co.; C. E. Woollen, Cons. Gas Electric Light & Power Co. of Baltimore; C. C. Abbott (guest), Pittsburgh Equitable Meter Co., and J. R. McQueen, Washington Gas Light Co.

At a meeting of the Subcommittee on Listing Requirements for Domestic Gas Appliance Pressure Regulators at the American Gas Association Testing Laboratories in Cleveland on March 25, steps were taken to prepare a revised edition of the gas pressure regulator standards. Among the most important items considered were the extension of the requirements to cover regulators equipped with safety vents and to permit the certification of regulators of different sizes for natural and manufactured gases.

With the increased use of gas pressure regulators on various types of domestic gas appliances and the difficulties encountered in venting regulators under certain types of installations, several companies have developed regulators of the safety vent type. The safety vent feature is intended to preclude the necessity of venting the regulators to the outer air or into a flue or combustion chamber, and is designed to close off the regulator vent in case of gas leak-

age through the diaphragm. As the present American Standard Listing Requirements for Domestic Gas Appliance Pressure Regulators do not cover regulators of the safety vent type, the committee felt that they should be changed to permit the certification of such equipment when properly designed and constructed.

The action taken to test and list the capacities of regulators on the basis of both natural and manufactured gases rather than requiring that regulators listed have sufficient capacities to take care of all gases is in line with the recent action of the Subcommittee on Approval Requirements for Central Heating Gas Appliances in permitting smaller size controls for natural gas than those originally required.

In view of the necessity of conducting research on certain phases of regulator performance, the revised requirements will probably not be completed by the subcommittee and published for criticism until after the next meeting of that group.

VALUE OF INDUSTRIAL BUSINESS

(Continued from page 192)

effort to convince the customer of these facts, and, oftentimes, a trial installation which our company has done when necessary.

Research is and always will be of paramount importance in maintaining and increasing, where desirable, our industrial sales. Only recently I listened to a very interesting talk on the subject of research. It was brought out very forcibly that research was constantly going on with other kinds of fuel and that we could expect results and improvements from these research activities. Just as the radiant tube burner has made enormous inroads on the electric furnace, it is not impossible to imagine a complete reversal and again see the electric furnace superior and more economical than gas-fired equipment. You men who are living with these problems daily can be of untold assistance in the realm of research.

My remarks have been based on certain assumptions and under conditions that might be referred to as normal. How long it will be before business and industry regain sufficient confidence to again press forward is a moot question. Until that time arrives, special and unusual circumstances may require decisions of policy in the marketing of industrial gas, entirely out of line with the thoughts expressed here. Any extenuating circumstances must be given due consideration, and sound business judgment and common sense dictate procedure.

I reiterate that in my judgment logical and economic development and the retention of industrial gas markets is absolutely necessary in the natural gas business.

Engineering School

THE engineering school, conducted in St. Louis by The Fox Furnace Company, March 15 to 18, attracted over two hundred of the jobber-dealer organization. This was the largest group ever to attend one of these air conditioning schools, which have been staged in various sections of the country for the past five years.

CREDIT UNION IS SUCCESSFUL

(Continued from page 175)

tenth of one per cent. In our case the loss to date is \$73—much less than the average.

The management of the company is not responsible for, and has no voice in, the affairs and operations of this credit union. The members elect from their own number a board of directors, who in turn elect the officers and various committees that are held responsible for operations.

Membership in the credit union is open to all employees of the company, whether they are located at the main office or at the outlying plants, shops or offices. In each department or outlying location an employee has been designated as a representative of the credit union to accept deposits and to make collections. Attention to these activities of the credit union requires only a small part of the time of representatives and does not interfere with the performance of their company duties.

Three years of operation of the plan has proven very definitely, in my opinion, that the credit union has contributed considerably to the welfare and happiness of its employee members.

UTILITY AND ITS CUSTOMERS

(Continued from page 188)

most people live on some form of budget and unless the collector is prompt in his visits to the customer the opportunity to collect will have passed. People learn to expect the collector at stated intervals. Spasmodic speeding up of collections is even more distasteful to the customer than the situation resulting from the collector delaying his appearance. Good customer relations will never be established by constant deviation from the rules of the company nor is it sound judgment to settle controversies by giving preference to a customer in the matter of making allowances or otherwise. This is merely postponing the inevitable.

The customer in dealing with the utility, especially in the matter of collections is very largely a creature of habit. It lies within the power of the company to make these habits either good or bad. If the customer forms the habit of paying promptly both the company and the customer benefit. On the other hand, if the company permits the customer to develop the habit of postponing the payment of bills both company and customer are living in an atmosphere that is not conducive to good public relations. There are many other phases of our business that bring us into contact with our customers but these are sufficient to illustrate the viewpoint of the writer.

There is another and very important channel through which the customers may become acquainted with the company and

this is through all of its employees rather than those whose positions with the company bring them in contact with customers as such. It is probably a fair statement to say that considering the employee and each member of his family as a company representative, a utility has at least one representative for each fifty customers on its books. If proper means are taken to educate all employees whether they be contact employees or not, the employee and his family furnish an excellent opportunity through neighborhood contacts to give the public a thorough understanding of the company and its attitude towards its patrons. So much good can be accomplished through this agency that a company not availing itself of this opportunity is remiss in its duty to the public.

Personnel Service

SERVICES OFFERED

Advertising Manager—11 years' experience as advertising manager large gas, electric and local transportation companies, plus 2 years as agency account representative. Thoroughly trained in planning and producing all types of advertising, publicity and sales promotion campaigns. Proved record of success. College graduate, age 34. Exceptional references. Moderate salary. 1190.

Insurance Specialist, graduate engineer, experienced utilities, operating and holding company, meter reader to junior executive; specialized five years in producing large economies in insurance protection of all kinds for utility companies. Available special reports or full time. 1193.

Engineer—College graduate with over five years' experience utilization department of large gas company and two years engineering department of eastern stove manufacturer. Desires position in engineering department appliance manufacturer. 1194.

Supervision or Sales Engineer—very familiar with the many phases of domestic, industrial, commercial and househeating sales work. Have supervised sales, surveys, installations and trained men. Want to make a permanent connection with a utility or appliance manufacturing company. 1195.

Salesman desires high-grade gas range line which has been approved by gas appliance and equipment merchandisers. Traveling Ohio, West Virginia and Kentucky for many years. Excellent connections with utilities and well-rated dealers. 1197.

Chemist (Ph.D., 1932). Six years' industrial experience, largely in new-product development, control and manufacturing. Experience includes executive responsibilities, purchasing and travel. Extensive acquaintance among scientific workers. Available immediately to go anywhere. 1198.

Gas Engineer 12 years with large utility, also exceptional experience in manufacture of tinned steelcase meters, thoroughly familiar with all phases of gas meter repair work, also industrial metering by positive displacement meters, desires position in supervisory capacity. West or middle west preferred. Married, family. (37). 1199.

Mechanical Draftsman, Graduate of technical high school. Experienced in assembly and detail drawings, pattern drawing, tracing, reproduction drawing, and blueprinting. (22). 1200.

SERVICES OFFERED

Young man, seeks position as construction **accountant**, junior executive, or **executive assistant**. Four years' experience as above with one of most prosperous and progressive gas companies in east. Graduate in mechanical engineering and business administration. Responsible, best of references. Available immediately through no fault of own. Location immaterial. Salary open. (29). 1201.

Executive, American, who has been **chief engineer** of two well known gas range companies; efficiency engineer or production. Desires to become affiliated with some good company manufacturing gas range or heating equipment. Best of references presented to whoever is interested. (36). 1202.

Engineer—unusual qualifications valuable to large bank or active gas utility, 18 years' experience field work and appraisal oil gas and natural gasoline properties prospects and markets; preparation and support of reports for rate making, purchase and refinancing; analysis financial records; extensive technical writer; present connection too restricted in range. 1203.

Engineer (26) single, sales minded, accustomed to traveling. Formerly with prominent manufacturer of gas appliances in development, laboratory, design and sales service work. Seeks employment with manufacturer or utility as sales engineer, development, sales service, service management industrial engineer or other work. B. S. 1204.

Young Gas Engineer—graduate mechanical engineer, 4½ years actual employment includes work in research testing laboratory of a leading manufacturer of heating and water heating appliances, servicing gas boilers and meter repair work for gas company; familiar natural and manufactured gases. Also experienced machine designer, mechanical and electrical draftsman. Married. 1205.

Gas Engineer—technical graduate with over fifteen years' broad experience in gas industry as foreman, engineer, and superintendent of operating companies and gas engineer of large holding company. All phases of plant and distribution operation. 1206.

POSITIONS OPEN

Managers for small properties in east and west by holding company. Please send full information on age, education, experience, and recommendations in first letter. 0333.

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AFFILIATED ASSOCIATIONS

Association of Gas Appliance and Equipment Manufacturers

Pres.—Merrill N. Davis, S. R. Dresser Mfg. Co., Bradford, Pa.
 Exec. Sec.—C. W. Berghorn, 60 East 42nd St., New York, N. Y.

Canadian Gas Association

Pres.—E. J. Tucker, Consumers Gas Co. of Toronto, Toronto, Ont.
 Sec.-Tr.—G. W. Allen, 7 Astley Ave., Toronto.

Empire State Gas and Electric Association

Pres.—J. P. Haftenkamp, Rochester Gas & Electric Corp., Rochester, N. Y.
 Chairman, Gas Section—F. R. Coster, Westchester Lighting Co., Mt. Vernon, N. Y.
 Sec.—George H. Smith, Grand Central Terminal, New York, N. Y.

Illinois Public Utilities Association

Pres.—E. F. Kelly, Central Illinois Public Service Co., Springfield, Ill.
 Sec.—Jack Abbey, 1314 Illinois Building, Springfield, Ill.

Indiana Gas Association

Pres.—H. Carl Wolf, Central Indiana Gas Co., Muncie, Ind.
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Michigan Gas Association

Pres.—Howard Pett, Consumers Power Co., Lansing, Mich.
 Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.

Maryland Utilities Association

Pres.—D. E. Stultz, Hagerstown, Md.
 Sec.—E. J. Roche, 55 Washington St., Hagerstown, Md.

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Missouri Association of Public Utilities

Pres.—Chester C. Smith, Kansas City Power and Light Co., Kansas City, Mo.
 Sec.-Tr.—N. R. Beagle, Missouri Power & Light Co., Jefferson City, Mo.
 Asst. Sec.—Jesse Blythe, 103 West High St., Jefferson City, Mo.

New England Gas Association

Pres.—George S. Hawley, The Bridgeport Gas Light Co., Bridgeport, Conn.
 Exec. Sec.—Clark Belden, 41 Mt. Vernon St., Boston, Mass.

New Jersey Gas Association

Pres.—J. P. Leinroth, Public Service Electric and Gas Co., Newark, N. J.
 Sec.-Tr.—H. A. Sutton, Public Service Electric and Gas Co., Newark, N. J.

Ohio Gas and Oil Men's Association

Pres.—Warren E. Burns, Marietta, Ohio.
 Sec.-Tr.—Frank B. Maullar, 811 First National Bank Bldg., Columbus, Ohio.

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